09/708,974

=> d ibib ab hitstr

L3 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 2001:283977 CAPLUS
DOCUMENT NUMBER: 134:295995
TITLE: Synthesis, compositions and uses of steroidal alkaloids as regulators of the hedgehog pathway
INVENTOR(S): Beachy, Philip A.
PATENT ASSIGNEE(S): Johns Hopkins University School of Medicine, USA
SOURCE: PCT Int. Appl., 164 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001027135	A2	20010419	WO 2000-US28479	20001013

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1999-159215P 19991013
US 2000-229271P 20000830

OTHER SOURCE(S): MARPAT 134:295995

AB The present invention makes available, inter alia, methods and reagents for modulating smoothened-dependent pathway activation. In certain embodiments, the subject methods can be used to counteract the phenotypic effects of unwanted activation of a hedgehog pathway, such as resulting from hedgehog gain-of-function, ptc loss-of-function or smoothened gain-of-function mutations. Synthesis of cyclopamine, jervine and cycloposine derivs. is presented.

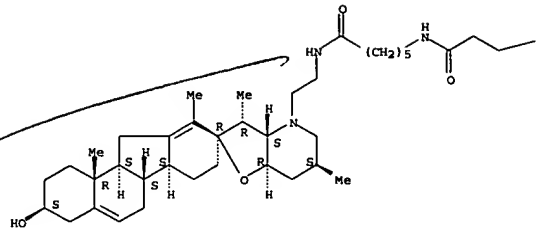
IT 334616-53-4P
RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(synthesis, compns. and uses of steroidal alkaloids as regulators of the hedgehog pathway)

RN 334616-53-4 CAPLUS
CN Benzenepropanamide, 4-azido-3-iodo-N-[6-[[2-[(3S,3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3',3'a,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3-hydroxy-3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]amino]-6-oxohexyl]- (9CI) (CA INDEX NAME)

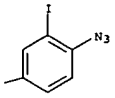
Absolute stereochemistry.

L3 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2001 ACS (Continued)

PAGE 1-A



PAGE 1-B



09/708,974

=> d ibib ab fqhit 1-3

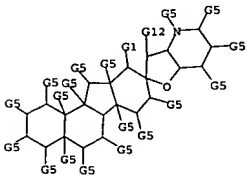
L10 ANSWER 1 OF 3 MARPAT COPYRIGHT 2001 ACS
ACCESSION NUMBER: 134:295995 MARPAT
TITLE: Synthesis, compositions and uses of steroidal alkaloids as regulators of the hedgehog pathway
INVENTOR(S): Beachy, Philip A.
PATENT ASSIGNEE(S): Johns Hopkins University School of Medicine, USA
SOURCE: PCT Int. Appl., 164 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGES: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001027135	A2	20010419	WO 2000-US28479	20001013
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.: US 1999-159215 19991013
US 2000-229273 20000830

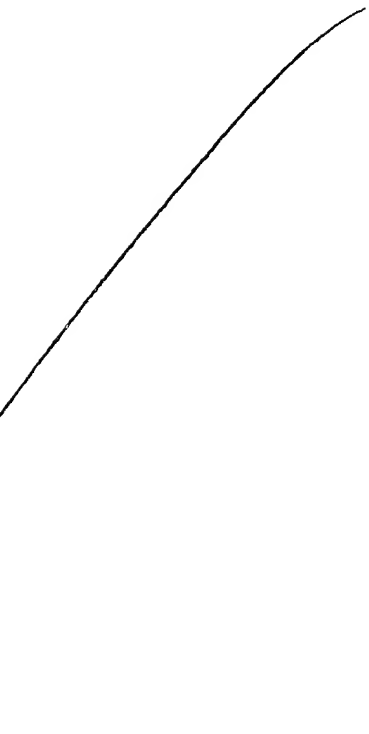
AB The present invention makes available, inter alia, methods and reagents for modulating smoothened-dependent pathway activation. In certain embodiments, the subject methods can be used to counteract the phenotypic effects of unwanted activation of a hedgehog pathway, such as resulting from hedgehog gain-of-function, ptc loss-of-function or smoothened gain-of-function mutations. Synthesis of cyclopamine, jervine and cycloposine derivs. is presented.

MSTR 8



MPL: claim 7
NTE: or unsaturated forms, and/or seco-, nor- or homo-derivatives
NTE: additional substitution and ring formation also claimed

L10 ANSWER 1 OF 3 MARPAT COPYRIGHT 2001 ACS (Continued)



L10 ANSWER 2 OF 3 MARPAT COPYRIGHT 2001 ACS
ACCESSION NUMBER: 133:99549 MARPAT
TITLE: Regulation of the hedgehog pathway and smoothened gain-of-function by gene/patched agonists
INVENTOR(S): Dudek, Henryk; Ji, Benxiu
PATENT ASSIGNEE(S): Ontogeny, Inc., USA
SOURCE: PCT Int. Appl., 114 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000041545	A2	20000720	WO 2000-US873	20000113
WO 2000041545	A3	20000928		
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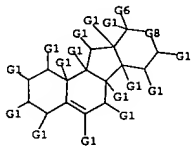
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6291516	B1	20010918	US 1999-417564	19991014
EP 1143961	A2	20011017	EP 2000-906910	20000113
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
US 2001034337	A1	20011025	US 2001-867311	20010529

PRIORITY APPLN. INFO.: US 1999-115642 19990113
US 1999-119594 19990210
US 1999-142124 19990702
US 1999-417564 19991014
WO 2000-US873 20000113

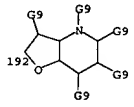
AB The present invention makes available methods and reagents for inhibiting aberrant growth states resulting from hedgehog gain-of-function, patched (ptc) loss-of-function or smoothened gain-of-function comprising contacting a cell with a compd., such as a polypeptide or small mol. in an amt. sufficient to control the aberrant growth state, e.g., to agonize a normal ptc/pathway or antagonize smoothened or hedgehog activity. The present invention further makes available methods and reagents for ameliorating the consequences of hedgehog loss-of-function, ptc gain-of-function, or smoothened loss-of-function comprising contacting a cell with a compd., such as a polypeptide or small mol., in an amt. sufficient for amelioration. In certain embodiments, the subject compds., e.g., a cAMP analog, adenylate cyclase agonist, or cAMP phosphodiesterase inhibitor, regulate cAMP levels, which in turn modulates activity of the hedgehog pathway. Thus, compds. such as jervine, cyclopamine, and forskolin analogs are also effective in inhibition of medulloblastoma.

MSTR 18

L10 ANSWER 2 OF 3 MARPAT COPYRIGHT 2001 ACS (Continued)



G8 = 192



MPL: claim 5
NTE: substitution is restricted

L10 ANSWER 3 OF 3 MARPAT COPYRIGHT 2001 ACS

ACCESSION NUMBER: 131:267077 MARPAT
TITLE: Use of steroidal alkaloid derivatives as inhibitors of hedgehog signaling pathways
INVENTOR(S): Beachy, Philip A.; Cooper, Michael K.; Porter, Jeffrey A.
PATENT ASSIGNEE(S): Johns Hopkins University School of Medicine, USA
SOURCE: PCT Int. Appl., 136 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9952534	A1	19991021	WO 1999-US7811	19990409
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9934860	A1	19991101	AU 1999-34860	19990409
EP 1067939	A1	20010117	EP 1999-916563	19990409
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

PRIORITY APPLN. INFO.: US 1998-81186 19980409
US 1998-81263 19980409
US 1998-90622 19980604
WO 1999-US7811 19990409

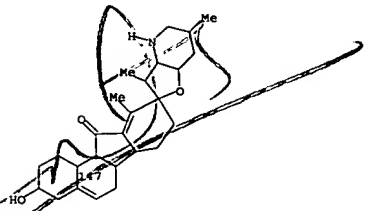
AB The present invention makes available assays and reagents inhibiting paracrine and/or autocrine signals produced by a hedgehog protein or aberrant activation of a hedgehog signal transduction pathway, e.g., which involve the use of a steroidal alkaloid or other small mol.

MSTR 1

G4—G1

G1 = 147

L10 ANSWER 3 OF 3 MARPAT COPYRIGHT 2001 ACS (Continued)



MPL: claim 3

REFERENCE COUNT: 7
REFERENCE(S):
(1) Aruba; EP 0020029 A 1980 CAPLUS
(2) Cura Nominees Pty Ltd; WO 9110743 A 1991 CAPLUS
(4) Sanwa Shiyouyaku Kk; JP 04230696 A 1992 CAPLUS
(5) Schramm, G; US 3673175 A 1972 CAPLUS
(6) Smithkline Beecham Co; EP 0375349 A 1990 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L6           16 S L1
L7          275 S L1 FULL
L8            0 S L7 AND USC/FA

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=> d ibib ab hitstr 1-12

L8 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2001:507523 CAPLUS
DOCUMENT NUMBER: 135:87198
TITLE: Use of steroidal alkaloids to reverse multidrug resistance
INVENTOR(S): Liscovitch, Mordechai; Lavie, Yaakov
PATENT ASSIGNEE(S): Yeda Research and Development Co. Ltd., Israel
SOURCE: PCT Int. Appl., 31 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001049279	A2	20010712	WO 2000-IL866	20001228

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: IL 1999-133809 A 19991230

AB The invention provides steroidal alkaloids for inhibiting or reversing multidrug resistance in cancer or in bacterial, fungal or parasitic infections. The steroidal alkaloid may be administered to the patient alone or in combination with an anticancer, antibacterial, antifungal or antiparasitic agent. Examples of steroidal alkaloids include members of the solanidane or spirosolane families (e.g. tomatidine), and C-nor-D-homo steroids, e.g. of the jervane or veratramine families.

IT **469-59-0**, Jervine **4449-51-8**, Cyclopamine **14410-98-1 14788-78-4 19773-24-1**, Peimisine **24508-94-9**, Tetrahydrojervine **212968-58-6**, Verapatuline **347842-64-2**
RL: BAC (Biological activity or effector, except adverse); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(steroidal alkaloids for reversal of multidrug resistance)

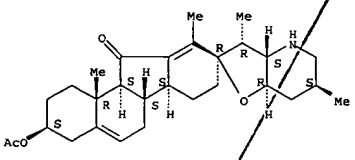
RN 469-59-0 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2001 ACS (Continued)

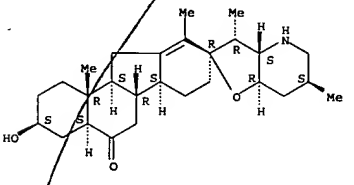
3-(acetyloxy)-1,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 19773-24-1 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-5(6H)-one, 1,2,3,3'a,4,4',4a,5',6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,4aS,6'S,6aR,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

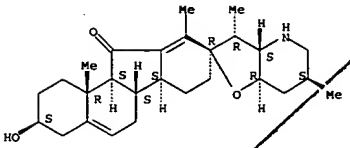
Absolute stereochemistry.



RN 24508-94-9 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(2H)-one, eicosahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'S,3S,3'R,3'aS,4aS,6'S,6aS,6bS,7'aR,10R,10aS,11aS,11bS)-(9CI) (CA INDEX NAME)

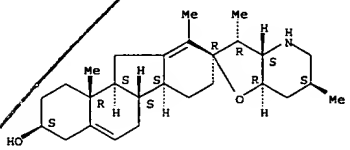
Absolute stereochemistry.

L8 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2001 ACS (Continued)



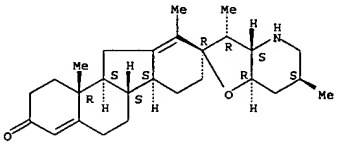
RN 4449-51-8 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



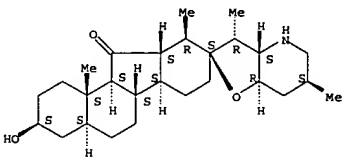
RN 14410-98-1 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3(2H)-one, 1,3'a,4',5,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-hexadecahydro-3',6',10,11b-tetramethyl-, (2'R,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



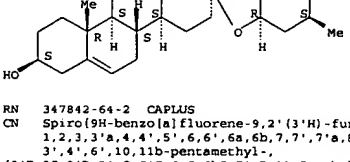
RN 14788-78-4 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(2H)-one,

L8 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2001 ACS (Continued)



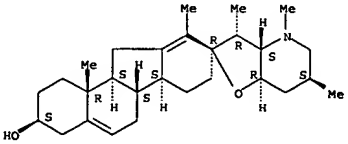
RN 212968-58-6 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridine]-4'(3'aH)-carboxylic acid, 1,2,3,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-11-oxo-, methyl ester, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 347842-64-2 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',4',6',10,11b-pentamethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



L8 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2001:434884 CAPLUS
DOCUMENT NUMBER: 135:41031
TITLE: Methods using hedgehog protein or hedgehog protein-encoding nucleic acid to stimulate insulin production by pancreatic .beta.-cells
INVENTOR(S): Habener, Joel F.; Thomas, Melissa K.
PATENT ASSIGNEE(S): The General Hospital Corporation, USA
SOURCE: PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

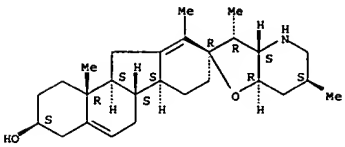
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001041786	A1	20010614	WO 2000-US33575	20001208

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1999-170282 P 19991210
AB The invention features a method of treating deficiency of insulin in a patient, comprising administering to a patient in need thereof hedgehog protein or nucleic acid in an amt. effective to raise the level of insulin in the patient. A method is also disclosed for suppressing insulin secretion using hedgehog protein inhibitor, e.g. cyclopamine.
IT **4449-51-8**, Cyclopamine **4449-51-8D**, Cyclopamine, derivs.
RL: BAC (Biological activity or effector, except adverse); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(hedgehog protein or hedgehog protein-encoding nucleic acid to stimulate insulin prodn. by pancreatic .beta.-cells)
RN 4449-51-8 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

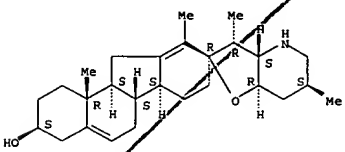
Absolute stereochemistry.

L8 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2001 ACS (Continued)



RN 4449-51-8 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 4
REFERENCE(S): (1) Genentech Inc; WO 9953058 A1 1999 CAPLUS
(2) German; US 6127598 A 2000 CAPLUS
(3) Hebrok, M; Genes and Development 1998, V12, P1705 CAPLUS
(4) Kim, S; Proc Nat Acad Sci 1998, V95, P13036

CAPLUS

L8 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2001:283977 CAPLUS
DOCUMENT NUMBER: 134:295995
TITLE: Synthesis, compositions and uses of steroidal alkaloids as regulators of the hedgehog pathway
INVENTOR(S): Beachy, Philip A.
PATENT ASSIGNEE(S): Johns Hopkins University School of Medicine, USA
SOURCE: PCT Int. Appl., 164 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

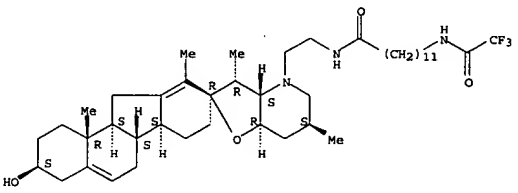
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001027135	A2	20010419	WO 2000-US28479	20001013

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1999-159215 P 19991013
US 2000-229273 P 20000830
OTHER SOURCE(S): MARPAT 134:295995
AB The present invention makes available, inter alia, methods and reagents for modulating smoothened-dependent pathway activation. In certain embodiments, the subject methods can be used to counteract the phenotypic effects of unwanted activation of a hedgehog pathway, such as resulting from hedgehog gain-of-function, ptc loss-of-function or smoothened gain-of-function mutations. Synthesis of cyclopamine, jervine and cycloposine derivs. is presented.
IT **334616-43-2P 334616-45-4P 334616-56-7P**
RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(synthesis, compns. and uses of steroidal alkaloids as regulators of the hedgehog pathway)
RN 334616-43-2 CAPLUS
CN Dodecanamide, N-[2-[(3S,3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3',3'a,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3-hydroxy-3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]-12-[(trifluoroacetyl)amino]- (9CI) (CA INDEX NAME)

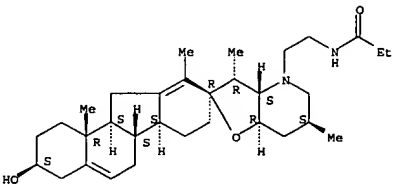
Absolute stereochemistry.

L8 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2001 ACS (Continued)



RN 334616-45-4 CAPLUS
CN Propanamide, N-[2-[(3S,3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3',3'a,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3-hydroxy-3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]- (9CI) (CA INDEX NAME)

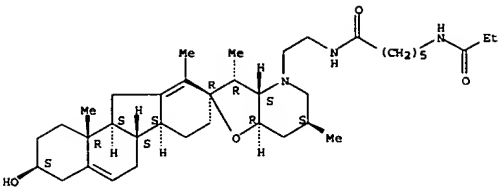
Absolute stereochemistry.



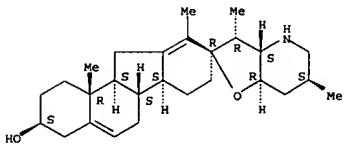
RN 334616-56-7 CAPLUS
CN Hexanamide, N-[2-[(3S,3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3',3'a,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3-hydroxy-3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]-6-[(1-oxopropyl)amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2001 ACS (Continued)



L8 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2001 ACS (Continued)



REFERENCE COUNT: 8
REFERENCE(S):
(1) Deutsches Krebsforschungszentrum Stiftung Des Offentlichen Rechts; WO 9922000 A 1999 CAPLUS
(3) Fujita, E; BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS/1997, V238(2), P658 CAPLUS
(4) Johns Hopkins University School Of Medicine; WO 9952534 A 1999 CAPLUS
(5) Kabushiki Kaisha Hayashibara Seibutsu Kagaku Kenkyujo; EP 0874048 a 1998 CAPLUS
(6) Murone, M; CURRENT BIOLOGY 1999, V9(2), P76 CAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 2000:880985 CAPLUS
DOCUMENT NUMBER: 134:37058
TITLE: Therapeutic use of an inhibitor of a hedgehog or a hedgehog-related signaling pathway
INVENTOR(S): Lamb, Jonathan Robert; Hoyne, Gerard Francis; Dallman, Margaret Jane
PATENT ASSIGNEE(S): Lorantis Limited, UK
SOURCE: PCT Int. Appl., 78 pp. CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000074706	A1	20001214	WO 2000-GB2191	20000605

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: GB 1999-13350 A 19990608
GB 1999-21953 A 19990916

AB Use of an inhibitor of a Hedgehog signaling pathway, or an inhibitor of a pathway which is a target of the Hedgehog signaling pathway in the prepn. of a medicament for treatment of epithelial cell hyperplasia, fibrosis of tissue, inflammation, cancer or an immune disorder. Also a transgenic animal or cell line capable of expressing a component or an inhibitor of a hedgehog signaling pathway or a target pathway of the hedgehog signaling pathway.

IT **4449-51-8**, Cyclopamine
RL: BAC (Biological activity or effector, except adverse); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(therapeutic use of inhibitor of hedgehog protein or hedgehog-related signaling pathway and transgenic animal or cell line expressing component or inhibitor of these pathways)

RN 4449-51-8 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2001 ACS

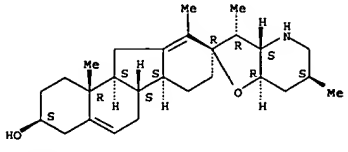
ACCESSION NUMBER: 2000:637045 CAPLUS
DOCUMENT NUMBER: 133:344307
TITLE: Effects of oncogenic mutations in Smoothened and Patched can be reversed by cyclopamine
AUTHOR(S): Taipale, Jussi; Chen, James K.; Cooper, Michael K.; Wang, Baolin; Mann, Randall K.; Milenkovic, Ljiljana; Scotts, Matthew P.; Beachy, Philip A.
CORPORATE SOURCE: Department of Molecular Biology and Genetics, The Johns Hopkins University School of Medicine, Baltimore, MD, 21205, USA
SOURCE: Nature (London) (2000), 406(6799), 1005-1009 CODEN: NATUAS; ISSN: 0028-0836
PUBLISHER: Nature Publishing Group
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Basal cell carcinoma, medulloblastoma, rhabdomyosarcoma and other human tumors are assocd. with mutations that activate the proto-oncogene Smoothened (SMO) or that inactivate the tumor suppressor Patched (PTCH). Smoothened and Patched mediate the cellular response to the Hedgehog (Hh) secreted protein signal, and oncogenic mutations affecting these proteins cause excess activity of the Hh response pathway. Here we show that the plant-derived teratogen cyclopamine, which inhibits the Hh response, is a potential 'mechanism-based' therapeutic agent for treatment of these tumors. We show that cyclopamine or synthetic derivs. with improved potency block activation of the Hh response pathway and abnormal cell growth assocd. with both types of oncogenic mutation. Our results also indicate that cyclopamine may act by influencing the balance between active and inactive forms of Smoothened.

IT **4449-51-8**, Cyclopamine
RL: BAC (Biological activity or effector, except adverse); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(effects of oncogenic mutations in Smoothened and Patched can be reversed by cyclopamine)

RN 4449-51-8 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 29
REFERENCE(S):
(1) Aza-Blanc, P; Cell 1997, V89, P1043 CAPLUS
(2) Beachy, P; Spring Harb Symp Quant Biol 1997, V62, P191 CAPLUS
(3) Bond, R; Nature 1995, V374, P272 CAPLUS
(4) Bourne, H; Curr Opin Cell Biol 1997, V9, P134 CAPLUS

L8 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2001 ACS (Continued)
(5) Chen, C; Cell 1999, V98, P305 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:493313 CAPLUS
DOCUMENT NUMBER: 133:99549
TITLE: Regulation of the hedgehog pathway and smoothened gain-of-function by gene patched agonists
INVENTOR(S): Dudek, Henryk; Ji, Benxiu
PATENT ASSIGNEE(S): Ontogeny, Inc., USA
SOURCE: PCT Int. Appl., 114 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000041545	A2	20000720	WO 2000-US873	20000113
WO 2000041545	A3	20000928		
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6291516	B1	20010918	US 1999-417564	19991014
EP 1143961	A2	20011017	EP 2000-906910	20000113
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
US 2001034337	A1	20011025	US 2001-867311	20010529

PRIORITY APPLN. INFO.:
US 1999-115642 P 19990113
US 1999-119594 P 19990210
US 1999-142124 P 19990702
US 1999-417564 A 19991014
WO 2000-US873 W 20000113

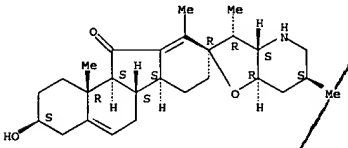
OTHER SOURCE(S): MARPAT 133:99549

AB The present invention makes available methods and reagents for inhibiting aberrant growth states resulting from hedgehog gain-of-function, patched (ptc) loss-of-function or smoothened gain-of-function comprising contacting a cell with a compd., such as a polypeptide or small mol. in an amt. sufficient to control the aberrant growth state, e.g., to agonize a normal ptc pathway or antagonize smoothened or hedgehog activity. The present invention further makes available methods and reagents for ameliorating the consequences of hedgehog loss-of-function, ptc gain-of-function, or smoothened loss-of-function comprising contacting a cell with a compd., such as a polypeptide or small mol., in an amt. sufficient for amelioration. In certain embodiments, the subject compds., e.g., a cAMP analog, adenylate cyclase agonist, or cAMP phosphodiesterase inhibitor, regulate cAMP levels, which in turn modulates activity of the hedgehog pathway. Thus, compds. such as jervine, cyclopamine, and forskolin analogs are also effective in inhibition of medulloblastoma.

IT **469-59-0**, Jervine **4449-51-8**, Cyclopamine
RL: BAC (Biological activity or effector, except adverse); **THU** (**Therapeutic use**); BIOL (Biological study); USES (Uses)
(regulation of the hedgehog pathway and smoothened gain-of-function by gene patched agonists)

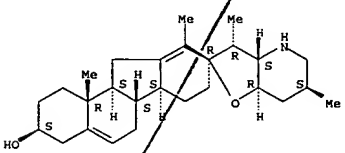
RN **469-59-0** CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN **4449-51-8** CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



L8 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2001 ACS (Continued)

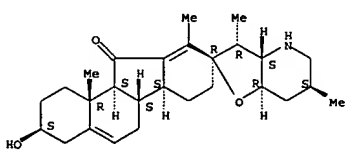
L8 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:38438 CAPLUS
DOCUMENT NUMBER: 132:202865
TITLE: Effects of Veratrum nigrum alkaloids on central catecholaminergic neurons of renal hypertensive rats
AUTHOR(S): Li, Hua; Gao, Guang-You; Li, Shu-Yuan
CORPORATE SOURCE: Department of Pharmacology, Dalian Medical University, Dalian, 116027, Peop. Rep. China
SOURCE: Acta Pharmacol. Sin. (2000), 21(1), 23-28
CODEN: APSCG5
PUBLISHER: Science Press
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Aim: To study the central hypotensive mechanism of Veratrum nigrum L var ussurience Nakai alkaloids (VnA) in renal hypertensive rats (RHR). Methods: The quant. method of immunocytochem. (ICC) was used to observe and detect the effect of VnA (30 .mu.g .cntdot. kg-1, iv) on activity of central catecholaminergic (CA) neurons of C1, C2, A1, and A5 areas in RHR. Results: VnA increased the immunoreactivity (IR) of tyrosine 3-monooxygenase (TM)-immunopos. (IP) neurons of C1, C2, and A5 areas in RHR exptl. group compared with RHR control group [pos. units: (1.9.+-.0.4), (1.18.+-.0.23), (1.2.+-.0.4) vs (0.15.+-.0.22), (0.31.+-.0.16), (0.69.+-.0.20), resp.]; IR of TM-IP neurons of C1 and C2 areas in RHR control group was decreased compared with sham-operated group [pos. units: (0.15.+-.0.22), (0.31.+-.0.16) vs (1.45.+-.0.29), (1.36.+-.0.25), resp.]. Conclusion: VnA increased the activity of central CA neurons in RHR to exert its hypotensive effect.

IT **469-59-0**, Jervine
RL: BAC (Biological activity or effector, except adverse); **THU** (**Therapeutic use**); BIOL (Biological study); USES (Uses)
(Veratrum nigrum alkaloids effect on central catecholaminergic neurons in renal hypertension)

RN **469-59-0** CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 13
REFERENCE(S): (1) Jin, G; Prog Physiol Sci 1985, V16, P306 CAPLUS
(2) Li, S; Chin Pharm J 1997, V32, P407 CAPLUS
(5) Ma, L; Chin Trad Herb Drugs 1998, V29, P105 CAPLUS

L8 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2001 ACS (Continued)

(7) Sun, M; Brain Res 1986, V368, P1 CAPLUS
(8) Tezuka, Y; J Nat Prod 1998, V61, P1397 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1999:672583 CAPLUS
DOCUMENT NUMBER: 131:267077
TITLE: Use of steroidal alkaloid derivatives as inhibitors of hedgehog signaling pathways
INVENTOR(S): Beachy, Philip A.; Cooper, Michael K.; Porter, Jeffrey A.
PATENT ASSIGNEE(S): Johns Hopkins University School of Medicine, USA
SOURCE: PCT Int. Appl., 136 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9952534	A1	19991021	WO 1999-US7811	19990409
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9934860	A1	19991101	AU 1999-34860	19990409
EP 1067939	A1	20010117	EP 1999-916563	19990409
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

PRIORITY APPLN. INFO.: US 1998-81186 P 19980409
US 1998-81263 P 19980409
US 1998-90622 A 19980604
WO 1999-US7811 W 19990409

OTHER SOURCE(S): MARPAT 131:267077

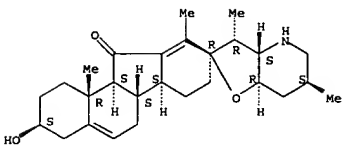
AB The present invention makes available assays and reagents inhibiting paracrine and/or autocrine signals produced by a hedgehog protein or aberrant activation of a hedgehog signal transduction pathway, e.g., which involve the use of a steroidal alkaloid or other small mol.

IT **469-59-0**, Jervine **4449-51-8**, Cyclopamine
RL: BAC (Biological activity or effector, except adverse); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(use of steroidal alkaloid derivs. as inhibitors of hedgehog signaling pathways in relation to effect on cholesterol biosynthesis)

RN 469-59-0 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

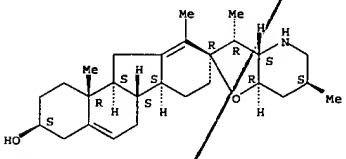
Absolute stereochemistry.

L8 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2001 ACS (Continued)



RN 4449-51-8 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 7
REFERENCE(S):

(1) Aruba; EP 0020029 A 1980 CAPLUS
(2) Cura Nominees Pty Ltd; WO 9110743 A 1991 CAPLUS
(4) Sanwa Shiyouyaku Kk; JP 04230696 A 1992 CAPLUS
(5) Schramm, G; US 3673175 A 1972 CAPLUS
(6) Smithkline Beecham Co; EP 0375349 A 1990 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2001 ACS

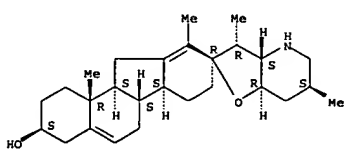
ACCESSION NUMBER: 1999:639750 CAPLUS
DOCUMENT NUMBER: 131:331613
TITLE: A looking glass perspective: thalidomide and cyclopamine
AUTHOR(S): Gaffield, William; Incardona, John P.; Kapur, Raj P.; Roelink, Henk
CORPORATE SOURCE: Western Regional Research Center, ARS, USDA, Albany, CA, 94710, USA
SOURCE: Cell. Mol. Biol. (Paris) (1999), 45(5), 579-588
CODEN: CMOBEF; ISSN: 0145-5680
PUBLISHER: C.M.B. Association
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review with many refs. Numerous naturally-occurring and synthetic compds. that were discovered initially because of their toxic properties, were later shown to possess biol. activities beneficial to humans that enabled them to serve as templates for the development of useful medicinal agents. A prominent example is thalidomide, a synthetic drug that gained notoriety originally due to its catastrophic teratogenicity in humans. The discovery of thalidomide's efficacy in treating several diseases has resulted in the recrudescence of the drug to society's usage. A current example of this phenomenon is the plant teratogen cyclopamine (11-deoxojervine), whose deleterious terata-inducing effects were restricted to grazing animals, but whose recently discovered inhibition of Sonic hedgehog signal transduction has provided both the potential to increase our understanding of organogenesis and to serve as a lead compd. in drug development.

IT **4449-51-8**, Cyclopamine
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(thalidomide and cyclopamine)

RN 4449-51-8 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 51
REFERENCE(S):

(1) Beachy, P; Cold Spring Harb Symp quant Biol 1997, V62, P191 CAPLUS
(2) Berressem, P; Chem Brit 1999, V35, P40 CAPLUS
(3) Blaschke, G; Arzneim-Forsch/Drug Res 1979, V29,

09/708,974

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L9 ANSWER 1 OF 5 USPATFULL

ACCESSION NUMBER: 2001:165614 USPATFULL
TITLE: Stem cells and their use in transplantation
INVENTOR(S): Moss, Peter Ian, London, Great Britain
Walters, David Martin, London, Great Britain
Pointer, Graham, London, Great Britain

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2001024824	A1	20010927
APPLICATION INFO.:	US 2000-731255	A1	20001206 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-169082	19991206 (60)
	US 2000-215109	20000628 (60)
	US 2000-238880	20001006 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Palmer & Dodge, LLP, One Beacon Street, Boston, MA, 02108
NUMBER OF CLAIMS: 127
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 18 Drawing Page(s)
LINE COUNT: 2446
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

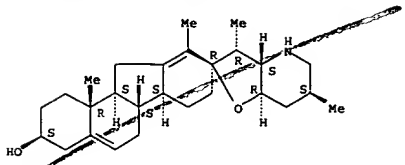
AB Methods and compositions are described for the treatment of type I insulin-dependent diabetes mellitus and other conditions using newly identified stem cells that are capable of differentiation into a variety of pancreatic islet cells, including insulin-producing beta cells, as well as hepatocytes. Nestin has been identified as a molecular marker for pancreatic stem cells, while cytokeratin-19 serves as a marker for a distinct class of islet ductal cells. Methods are described whereby nestin-positive stem cells can be isolated from pancreatic islets and cultured to obtain further stem cells or pseudo-islet like structures. Methods for ex vivo differentiation of the pancreatic stem cells are disclosed. Methods are described whereby pancreatic stem cells can be isolated, expanded, and transplanted into a patient in need thereof, either allogeneically, isogeneically or xenogenically, to provide replacement for lost or damaged insulin-secreting cells or other cells.

IT **4449-51-8**, Cyclopamine
(isolation, culture, and transplantation of nestin-pos. pancreatic stem cells for diabetes treatment)

RN 4449-51-8 USPATFULL
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L9 ANSWER 1 OF 5 USPATFULL (Continued)



L9 ANSWER 2 OF 5 USPATFULL

ACCESSION NUMBER: 2001:158338 USPATFULL
TITLE: Regulators of the hedgehog pathway, compositions and uses related thereto
INVENTOR(S): Dudek, Henryk, Wellesley, MA, United States
Ji, Benxiu, Sharon, MA, United States
PATENT ASSIGNEE(S): Curis, Inc., Cambridge, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6291516	B1	20010918
APPLICATION INFO.:	US 1999-417564		19991014 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-115642	19990113 (60)
	US 1999-119594	19990210 (60)
	US 1999-142124	19990702 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Krass, Frederick
LEGAL REPRESENTATIVE: Vincent, Matthew P., Halstead, David P.Ropes & Gray
NUMBER OF CLAIMS: 16
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 19 Drawing Figure(s); 19 Drawing Page(s)
LINE COUNT: 3730
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

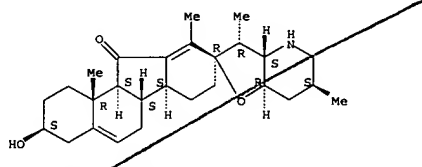
AB The present invention makes available methods and reagents for inhibiting aberrant growth states resulting from hedgehog gain-of-function, ptc loss-of-function or smoothened gain-of-function comprising contacting a cell with a compound, such as a polypeptide or small molecule in an amount sufficient to control the aberrant growth state, e.g., to agonize a normal ptc pathway or antagonize smoothened or hedgehog activity. The present invention further makes available methods and reagents for ameliorating the consequences of hedgehog loss-of-function, ptc gain-of-function, or smoothened loss-of-function comprising contacting a cell with a compound, such as a polypeptide or small molecule, in an amount sufficient to ameliorate the In certain embodiments, the subject compounds, e.g., a cAMP analog, adenylate cyclase agonist, or cAMP phosphodiesterase inhibitor, regulate cAMP levels, which in turn modulates activity of the hedgehog pathway.

IT **469-59-0**, Jervine **4449-51-8**, Cyclopamine
(regulation of the hedgehog pathway and smoothened gain-of-function by gene patched agonists)

RN 469-59-0 USPATFULL
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2',3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)- (9CI) (CA INDEX NAME)

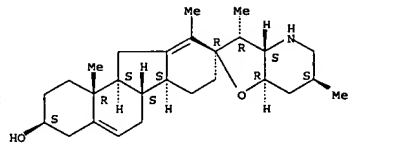
Absolute stereochemistry.

L9 ANSWER 2 OF 5 USPATFULL (Continued)



RN 4449-51-8 USPATFULL
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 3 OF 5 USPATFULL
ACCESSION NUMBER: 2001:152946 USPATFULL
TITLE: Cholesterol and hedgehog signaling
INVENTOR(S): Beachy, Philip A., Baltimore, MD, United States
Porter, Jeffrey A., Belmont, MA, United States
Cooper, Michael K., Baltimore, MD, United States
PATENT ASSIGNEE(S): The Johns Hopkins University School of Medicine, Baltimore, MD, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6288043	B1	20010911
APPLICATION INFO.:	US 1999-250785		19990212 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-74714	19980213 (60)

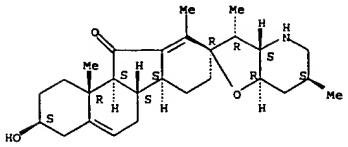
DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Krass, Frederick
LEGAL REPRESENTATIVE: Gray Cary Ware & Freidenrich LLP, Haile, Lisa A.
NUMBER OF CLAIMS: 3
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 11 Drawing Figure(s); 7 Drawing Page(s)
LINE COUNT: 1222
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention sterol-modified hedgehog polypeptides and functional fragments thereof. Methods of identifying compositions which affect hedgehog activity based on inhibition of cholesterol modification of hedgehog protein are described. In one aspect of the invention, the method provides a means for affecting cholesterol biosynthesis or transport in a cell comprising contacting a cell with an effective amount of a compound that affects hedgehog, thereby affecting cholesterol biosynthesis or transport. The effect may be inhibition or stimulation of cholesterol biosynthesis or transport.

IT **469-59-0**, Jervine
(cholesterol and hedgehog signaling, and modulation of cholesterol biosynthesis and transport)
RN 469-59-0 USPATFULL
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

L9 ANSWER 3 OF 5 USPATFULL (Continued)



L9 ANSWER 4 OF 5 USPATFULL
ACCESSION NUMBER: 2000:67202 USPATFULL
TITLE: Method and apparatus for conditioning gas for medical procedures having humidity monitoring and recharge alert
INVENTOR(S): Ott, Douglas E., 682 Foster Rd., Macon, GA, United States 31210
Schaefer, John F., Macon, GA, United States
Gray, Robert I., Macon, GA, United States
PATENT ASSIGNEE(S): Ott, Douglas E., Macon, GA, United States (U.S. individual)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6068609		20000530
APPLICATION INFO.:	US 1998-81186		19980519 (9)

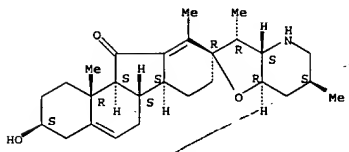
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Bockelman, Mark
ASSISTANT EXAMINER: Thompson, Michael M
LEGAL REPRESENTATIVE: Needle & Rosenberg, P.C.
NUMBER OF CLAIMS: 42
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 5 Drawing Figure(s); 4 Drawing Page(s)
LINE COUNT: 991
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An apparatus for conditioning gas for use in a medical procedure, such as endoscopy, the gas being received into the apparatus from a gas source. The apparatus comprises a housing defining a chamber having an entry port and an exit port. A humidification means comprising at least one water-retainer layer is disposed within the chamber in the path of travel of the gas for humidifying the gas as it passes through the chamber. A humidity sensor is disposed within the chamber that senses the humidity of the gas exiting the chamber. A monitoring circuit is connected to the humidity sensor that detects when the chamber requires a recharge of liquid based on the humidity of the gas in the chamber, and generates a recharge signal indicative thereof. A charging port on the housing provides access into the chamber to recharge the chamber with water. A heating element and temperature sensor are also disposed within the chamber. A control circuit further regulates the temperature of the gas exiting the chamber.

IT **469-59-0**, Jervine **4449-51-8**, Cyclopamine
(use of steroidal alkaloid derivs. as inhibitors of hedgehog signaling pathways in relation to effect on cholesterol biosynthesis)
RN 469-59-0 USPATFULL
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-
(9CI) (CA INDEX NAME)

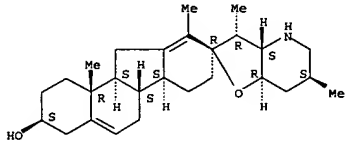
Absolute stereochemistry.

L9 ANSWER 4 OF 5 USPATFULL (Continued)



RN 4449-51-8 USPATFULL
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-
(9CI) (CA INDEX NAME)

Absolute stereochemistry.



09/708,974

=> d ibib ab fqhit 1-3

L11 ANSWER 1 OF 3 MARPAT COPYRIGHT 2001 ACS

ACCESSION NUMBER: 134:295995 MARPAT
TITLE: Synthesis, compositions and uses of steroidal alkaloids as regulators of the hedgehog pathway
INVENTOR(S): Beachy, Philip A.
PATENT ASSIGNEE(S): Johns Hopkins University School of Medicine, USA
SOURCE: PCT Int. Appl., 164 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

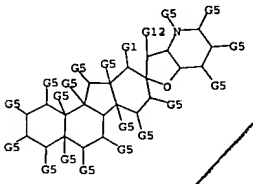
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001027135	A2	20010419	WO 2000-US28479	20001013

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1999-159215 19991013
US 2000-229273 20000830

AB The present invention makes available, inter alia, methods and reagents for modulating smoothened-dependent pathway activation. In certain embodiments, the subject methods can be used to counteract the phenotypic effects of unwanted activation of a hedgehog pathway, such as resulting from hedgehog gain-of-function, ptc loss-of-function or smoothened gain-of-function mutations. Synthesis of cyclopamine, jervine and cycloposine derivs. is presented.

MSTR 8



MPL: claim 7
NTE: or unsaturated forms, and/or seco-, nor- or homo-derivatives
NTE: additional substitution and ring formation also claimed

L11 ANSWER 1 OF 3 MARPAT COPYRIGHT 2001 ACS (Continued)

L11 ANSWER 2 OF 3 MARPAT COPYRIGHT 2001 ACS

ACCESSION NUMBER: 133:99549 MARPAT
TITLE: Regulation of the hedgehog pathway and smoothened gain-of-function by gene patched agonists
INVENTOR(S): Dudek, Henryk; Ji, Benxiu
PATENT ASSIGNEE(S): Ontogeny, Inc., USA
SOURCE: PCT Int. Appl., 114 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000041545	A2	20000720	WO 2000-US873	20000113
WO 2000041545	A3	20000928		

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 6291516	B1	20010918	US 1999-417564	19991014
EP 1143961	A2	20011017	EP 2000-906910	20000113

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI

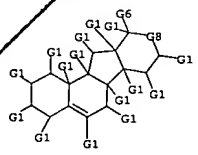
US 2001034337	A1	20011025	US 2001-867311	20010529

PRIORITY APPLN. INFO.: US 1999-115642 19990113
US 1999-119594 19990210
US 1999-142124 19990702
US 1999-417564 19991014
WO 2000-US873 20000113

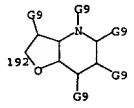
AB The present invention makes available methods and reagents for inhibiting aberrant growth states resulting from hedgehog gain-of-function, patched (ptc) loss-of-function or smoothened gain-of-function comprising contacting a cell with a compd., such as a polypeptide or small mol. in an amt. sufficient to control the aberrant growth state, e.g., to agonize a normal ptc pathway or antagonize smoothened or hedgehog activity. The present invention further makes available methods and reagents for ameliorating the consequences of hedgehog loss-of-function, ptc gain-of-function, or smoothened loss-of-function comprising contacting a cell with a compd., such as a polypeptide or small mol., in an amt. sufficient for amelioration. In certain embodiments, the subject compds., e.g., a cAMP analog, adenylate cyclase agonist, or cAMP phosphodiesterase inhibitor, regulate cAMP levels, which in turn modulates activity of the hedgehog pathway. Thus, compds. such as jervine, cyclopamine, and forskolin analogs are also effective in inhibition of medulloblastoma.

MSTR 1B

L11 ANSWER 2 OF 3 MARPAT COPYRIGHT 2001 ACS (Continued)



G8 = 192



MPL: claim 5
NTE: substitution is restricted

L11 ANSWER 3 OF 3 MARPAT COPYRIGHT 2001 ACS

ACCESSION NUMBER: 131:267077 MARPAT
TITLE: Use of steroidal alkaloid derivatives as inhibitors of hedgehog signaling pathways
INVENTOR(S): Beachy, Philip A.; Cooper, Michael K.; Porter, Jeffrey A.
PATENT ASSIGNEE(S): Johns Hopkins University School of Medicine, USA
SOURCE: PCT Int. Appl., 136 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGES: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9952534	A1	19991021	WO 1999-US7811	19990409
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
AU 9934860	A1	19991101	AU 1999-34860	19990409
EP 1067939	A1	20010117	EP 1999-916563	19990409
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			

PRIORITY APPLN. INFO.: US 1998-81186 19980409
US 1998-81263 19980409
US 1998-90622 19980604
WO 1999-US7811 19990409

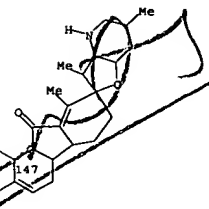
AB The present invention makes available assays and reagents inhibiting paracrine and/or autocrine signals produced by a hedgehog protein or aberrant activation of a hedgehog signal transduction pathway, e.g., which involve the use of a steroidal alkaloid or other small mol.

NSTR 1

G4—G1

G1 = 147

L11 ANSWER 3 OF 3 MARPAT COPYRIGHT 2001 ACS (Continued)



MPL: claim 3

REFERENCE COUNT: 7
REFERENCE(S):
(1) Aruba; EP 0020029 A 1980 CAPLUS
(2) Cura Nominees Pty Ltd; WO 9110743 A 1991 CAPLUS
(4) Sanwa Shiyouyaku Kk; JP 04230696 A 1992 CAPLUS
(5) Schramm, G; US 3673175 A 1972 CAPLUS
(6) Smithkline Beecham Co; EP 0375349 A 1990 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L13 ANSWER 1 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1966:449755 CAPLUS
DOCUMENT NUMBER: 65:49755
ORIGINAL REFERENCE NO.: 65:9343e-f
TITLE: Isolation and identification of alkaloids from Veratrum lobelianum. I
AUTHOR(S): Shinkarenko, A. L.; Bondarenko, N. V.
CORPORATE SOURCE: Pharm. Inst., Pyatigorsk
SOURCE: Rast. Resursy (1966), 2(1), 45-50
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB The total amt. of alkaloids in the plants from Northern Caucasus at 1217-2000 m. above sea level was 0.23-1.4 in the leaves, 0.6- 1.86 in the roots, and 0.09-1.41% in the stalks, during vegetation, blooming, and fruiting. The ether was replaced by CHCl3 in Poethke gravimetric method (CA 31, 81107). The presence of 16 individual substances, with pos. Dragendorff test, was established in the CHCl3 ext. by formamide paper chromatography, with CHCl3, CHCl3-C6H6, and CHCl3-dioxane as solvents. Jervine, by Poethke method, and germidine, by chromatography, were isolated and identified. At altitudes of 1800 to 2000 m., the alkaloid content was generally higher. 27 references.

L13 ANSWER 2 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1966:449754 CAPLUS
DOCUMENT NUMBER: 65:49754
ORIGINAL REFERENCE NO.: 65:9343d-e
TITLE: Mineral nutrient studies in sugarcane
AUTHOR(S): Bishop, R. T.
SOURCE: Proc. Ann. Congr. S. African Sugar Technologists' Assoc. (1965), 39, 128-33
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The abs. amts. of N, P, K, Ca, Mg, and Na in the aboveground portions of the plant were detd. during maturation. The correlation coeffs. between concns. of nutrients (N, P, K, Ca, Mg, Na, Cu, and Mn) in the third leaf blade and environmental factors (rainfall, soil moisture, stalk increment, air temp., total radiation, evapn., and soil temp.)are presented. The effect of the age of the crop on concn. of nutrients in third leaf blades is considered.

L13 ANSWER 3 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1966:414987 CAPLUS
DOCUMENT NUMBER: 65:14987
ORIGINAL REFERENCE NO.: 65:2813b-c
TITLE: Teratogenic compounds of Veratrum californicum (Durand). I. Preparation and characterization of fractions and alkaloids for biologic testing
AUTHOR(S): Keeler, Richard F.; Binns, Wayne
CORPORATE SOURCE: Animal Disease & Parasite Res. Div., U.S. Dept. of Agr., Ames, Iowa
SOURCE: Can. J. Biochem. (1966), 44(6), 819-28
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The isolation and identification of 4 known alkaloids (jervine, veratrosine, pseudojervine, and isorubijervine) was achieved from teratogenic fractions of V. californicum. Two addnl. alkaloids, not previously reported and designated alkaloids X and V, were also isolated from these fractions and partially characterized.

L13 ANSWER 4 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1966:414986 CAPLUS
DOCUMENT NUMBER: 65:14986
ORIGINAL REFERENCE NO.: 65:2812f-h,2813a-b
TITLE: Mechanism for bradycardia induced by acute systemic anoxia in the dog
AUTHOR(S): Litwin, J.; Skolasinska, K.
CORPORATE SOURCE: School Med., Warsaw
SOURCE: Arch. Ges. Physiol. (1966), 289(2), 109-21
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Studies on acute systemic anoxia were carried out on 46 heparinized, chloralosc-anesthetized mongrel dogs weighing 9.5-20.0 kg., some of which were allowed to breathe spontaneously, others were artificially ventilated, tubocurarine.HCl 0.1 mg./kg. body wt., being administered intravenously to block the neuromuscular transmission. The artificially ventilated animals were divided into a closed- and an open-chest group. All animals exhibited a biphasic response of the heart, consisting of a primary tachycardia and a secondary bradycardia; the latter was marked and amounted to 45.8 and 67.2% redn. of heart rate in artificially ventilated and in spontaneously breathing animals, resp. The primary tachycardia was usually more distinct in spontaneously breathing animals as compared to those in which the respiration was controlled. Since bilateral vagotomy, atropinization, and ganglionic blockade considerably reduced the intensity of bradycardia and, in some cases, abolished it completely, it appeared that anoxic bradycardia was due mainly to an increased tone of the vagal cardioinhibitory center. Moderate slowing of the heart, which persisted in some expts., following vagotomy, atropinization, and ganglionic blockade, appeared to be the outcome of the local depressant action of severe anoxia on the heart itself, but the local action of anoxia was only of secondary importance as compared to the nervous vagal mechanism. On the other hand, spinal-cord destruction and bilateral adrenalectomy both caused a significant enhancement of secondary anoxic bradycardia, indicating that a strong stimulation of the sympatho-adrenal system occurred throughout the anoxia, resulting in primary tachycardia and, in later stages of anoxia, opposing vagal slowing of the heart. A very marked exaggeration of bradycardia after adrenalectomy alone proved that increased release of catechol amines from the adrenal medulla was of paramount importance in this regard. Anoxic bradycardia did not result from stimulation of either baro- or chemoreceptors in the sino-aortic arch; some other mechanism, gave rise to the increased vagal discharge to the heart accounting for the anoxic bradycardia and constituted the principal factor responsible for cardiac slowing in anoxia; the reflexes from carotid and aortic receptors appeared to be of secondary importance. Such a mechanism may consist either in a reflex initiated at some unidentified receptors or in a central stimulating effect of anoxia on vagal cardioinhibitory neurons.

L13 ANSWER 9 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1966:68045 CAPLUS
DOCUMENT NUMBER: 64:68045
ORIGINAL REFERENCE NO.: 64:12746e-f
TITLE: Lycopodium alkaloids. XVII. Mass spectra of annotine and some annotine derivatives
AUTHOR(S): MacLean, D. B.; Curcumelli-Rodostamo, M.
CORPORATE SOURCE: McMaster Univ., Hamilton
SOURCE: Can. J. Chem. (1966), 44(5), 611-20
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The mass spectra of annotine and some of its derivs. are recorded and discussed. Fragmentation mechanisms are proposed to account for the formation of the major peaks in the spectra. The compn. of the ions has been verified by measurement of the high-resolution spectra of 4 of the 5 compds. The results lend support to the structure previously proposed for this alkaloid.

L13 ANSWER 10 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1965:498716 CAPLUS
DOCUMENT NUMBER: 63:98716
ORIGINAL REFERENCE NO.: 63:18209h,18210a-c
TITLE: C-N or-D-homosteroids and related alkaloids. IV. 11-Deoxojervine, a new alkaloid from Veratrum species
AUTHOR(S): Masamune, Tadashi; Mori, Yoichi; Takasugi, Mitsuo; Murai, Akio; Ohuchi, Shigehiro; Sato, Norio; Katsui, Nobukatsu
CORPORATE SOURCE: Hokkaido Univ., Sapporo
SOURCE: Bull. Chem. Soc. Japan (1965), 38(8), 1374-8
DOCUMENT TYPE: Journal
LANGUAGE: English

AB cf. CA 62, 14774c. The benzene exts. of alkalized, ground roots of Veratrum album var glandifiorum subjected to sepn. by a modified Jacobs' procedure (cf. Stoll, et al., CA 50, 10748g), gave 11-deoxojervine (I) probably identical with Takaoka's sterol (Nippon Kagaku Zasshi 60, 1090(1939)), veratramine (II), rubijervine, solanidine, and .beta.-sitosterol. I ([.alpha.]23D -44.2.degree.) m. 236-8.degree. (MeOH) (crystals contained solvent); on drying at the b.p. of xylene, the m.p. changed to 237-8.degree. and the ir spectrum also changed. Acetylation of 101 mg. I with 1 ml. Ac2O and 1 ml. pyridine at 100.degree. gave 84 mg. 3-N-diacetyl-11-deoxojervine (III). III, recrystd. from aq. alc., m. 168-4.degree. (crystals contained solvent), resolidified and again m. 195-7.degree.; III dried at the b.p. of xylene m. 195-7.degree. and had [.alpha.]23D 1.1.degree.. Attempted redn. of I with LiAlH4 or Li in liquid NH3 gave quant. recovery of I. I (220 mg.) in 50 ml. MeOH treated with 3.1 ml. concd. H2SO4 and 55 mg. Fe2(SO4)3 in the cold, and the mixt. stirred 5 hrs. at room temp. gave 10 mg. II. Wolff-Kishner redn. of 5 g. jervine according to Barton's procedure (B., et al., CA 49, 12505e) gave 1.1 g. I, and 0.45 g. conjugated diene (IV), m. 211-13.degree., [.alpha.]23D, 3.5.degree. when recrystd. from Me2CO or MeOH. Acetylation of 77 mg. IV with Ac2O-pyridine at 100.degree. gave 48 mg. O,O,N-triacetyl deriv., m. 116-18.degree., [.alpha.]23D 46.degree. after recrystn. from MeOH-EtOH. On the basis of these facts and of the ir, uv, and N.M.R. spectra, the structure shown for IV is suggested. Jervin-11.beta.-ol (507 mg.) in 500 ml. boiling BuOH treated over 5 hrs. with 36 g. Na, and the mixt. refluxed an addnl. 1.5 hrs., gave 83 mg. IV, which formed the expected triacetyl deriv. (m. 120-1.degree.). Direct transformation of I into II supports the .alpha.-configuration of the H on C-9. The ir, uv, and N.M.R. spectra of many of the compds. are given.

L13 ANSWER 11 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1965:498715 CAPLUS
DOCUMENT NUMBER: 63:98715
ORIGINAL REFERENCE NO.: 63:18208c-h,18209a-h
TITLE: Reactions of epoxides. VII. Acid-catalyzed reactions of 13,17a-epoxy- and 17a,18-epoxy-C-nor-D-homospirostan
AUTHOR(S): Coxon, J. M.; Hartshorn, M. P.; Kirk, D. N.
CORPORATE SOURCE: Univ. Canterbury, Christchurch, N. Z.
SOURCE: Tetrahedron (1965), 21(9), 2489-99
DOCUMENT TYPE: Journal
LANGUAGE: English

AB cf. CA 63, 8447c. C-Nor-D-homo-13(17a)-olefin (I, 500 mg.) in 80 ml. dioxane treated with 0.1M aq. HOBr 40 min. at 20.degree. and the dil. mixt. filtered gave 480 mg. bromohydrin (II, R : Br) (III), m. 130-1.degree. (ligroine), [.alpha.]D -36.degree. (C 0.5). III (135 mg.) in 10 ml. alc. kept 18 hrs. at 20.degree. with 150 mg. KOH gave 80 mg. 3.beta.-hydroxy-13.alpha.,17.alpha.-epoxide, m. 215-18.degree., converted by acetylation with 1:10 Ac2O-C5H5N in 16 hrs. to 3.beta.-acetoxy-13.alpha.,17a.alpha.-epoxide (IV), m. 194-6.degree.. II (R : OH) (V, 3 g.) in 25 ml. C5H5N treated dropwise at 0.degree. with 2.5 ml. SOCl2 and the dild. mixt. extd. with Et2O gave the 13.beta.,17a.beta.-epoxide (VI), m. 187.5-9.0.degree.. Since V is readily obtained by acid-catalyzed hydrolysis of the mixed .alpha.- and .beta.-epoxides IV and VI, formed by epoxidation of I, the tedious chromatographic sepn. to produce IV and VI can be avoided. The ready availability of the tetrasubstituted epoxides led to their inclusion in studies of BF3-catalyzed rearrangements. IV (1 g.) in 100 ml. anhyd. C6H6 treated 30 sec. with 1 ml. BF3-Et2O and dild. with Et2O, the washed soln. evapd. and chromatographed on 80 g. Al2O3, eluted with 8:1 ligroine-C6H6 and the eluate (333 mg.) csystd. from C5H12 and MeOH gave the 8(14), 13(17a)-diene (VII), m. 160-2.degree., [.alpha.]D -62.degree. (c 1.17). Elution with 1:1 ligroine-C6H6 gave 300 mg. gum (VIII), [.alpha.]D -53.degree. (C 1.33). Further elation with C6H6 gave 180 mg. hecogenin acetate, m. 250-2.degree. (MeOH), [.alpha.]D -7.degree., and final elution with Et2O gave the fluorohydrin II (R : F) (IX), m. 176-7.degree. (C6H14), [.alpha.]D -62.degree. (c 0.73). VIII (175 g.) treated with 0.5 ml. BzH in 10 ml. alc. contg. 60 mg. KOH 18 hrs. at 20.degree. and the product isolated with Et2O, chromatographed on Al2O3, and elated with C6H6 gave 143 mg. 13-acetyl-C-nor compd. (X) benzylidene deriv., [.alpha.]D -38.degree. (c 0.93). Elution with Et2O gave 29 mg. 3.beta.-hydroxy-C-nor-D-homo-17a ketone (XI), [.alpha.]D -42.degree. (C 1.12). IX (100 mg.) and 100 mg. KOH heated under reflux 4 hrs. in 25 ml. 90% aq. alc. gave the 3.beta.-hydroxy-13.alpha.,17a.alpha.-oxide, acetylated to IV. IV (800 mg.) and 0.8 ml. BF3-Et2O kept 1 hr. in 80 ml. anhyd. Et2O gave 646 mg. IX. IX (140 mg.) and 0.16 ml. BF3-Et2O kept 22 min. in 16 ml. C6H6 gave material, .lambda. 251 m.mu. (.epsilon. 3200) contg. 14% diene VII. Crystn. from MeOH gave 20 mg. hecogenin acetate, and chromatography of the residues on Al2O3 gave a ketonic fraction consisting mainly of X and unreacted IX. VI (500 mg.) in 50 ml. dry C6H6 treated 3 min. with 0.5 ml. BF3-Et2O and isolation of the steroidal product gave 17a.beta.-hydroxy-17a.alpha.-methyl-.DELTA.8(14)-olefin (XII), m. 170-1.degree. (MeOH), [.alpha.]D -94.degree. (c 1.03), deep yellow color with C(NO2)4, dehydrated with SOCl2-C5H5N to VII, thus supporting the trans- 13.alpha.,17a.beta.-configuration of XII. The reaction between VI and BF3 in Et2O gave only unreacted VI and the fluorohydrin (XIII), m. 130-7.degree. (decompn.), [.alpha.]D -50.degree. (c 0.96), hydrolyzed to the 3.beta.-hydroxy-13.beta.,17a.beta.-epoxide, m. 128-40.degree., [.alpha.]D -60.5.degree., acetylated to VI. Earlier work (C 63, 7081e) 18, (759)(1965)] made available two 17a,18-epoxides (XIV, XV) and their behavior with BF3 and with aq. HClO4 was examd. XIV (1.3 g.) and 1.3 ml. BF3-Et2O kept 15 min. in 130 ml. C6H6 and the products isolated gave 60% 18-aldehyde (XVI), m. 186-8.degree., [.alpha.]D -63.degree. (c 0.92), not epimerized by base and thus confirming the .alpha.-configuration of the CHO group. Two unidentified minor products, m. 167-73.degree., [.alpha.]D -46.degree. (c 1.22); and m. 187-90.degree., [.alpha.]D -9.degree. (c 1.0), and XVI were also isolated by chromatography in 210, 210, and 330 mg. amts. Rearrangement of XIV with HClO4 in aq. dioxane 10 min. at 20.degree. gave 83% XVI, together with the 18-hydroxy-13(17a).DELTA.-olefin (XVII, R : H, OH) (XVIII), m. 204-6.degree., [.alpha.]D -64.degree. (c 1.28), acetylated to XVII (R : H, OAc), m. 159-63.degree., [.alpha.]D -48.degree. (c 0.87), reduced in turn by Li-EtNH2 to the endocyclic olefin I. The behavior of XV with BF3 was very unusual. XV (2.3 g.) in 230 ml. C6H6 treated 30 sec. with 2.3 ml. BF3-Et2O and the isolated product adsorbed on 80 g. Al2O3, eluted with 1:1 ligroine-C6H6 and the gum (1.5 g.) crystd. from MeOH gave the cyclic ether (XIX), m. 209-10.degree., [.alpha.]D -62.5.degree. (c 0.83). Elution with C6H6 gave the fluorohydrin (XX, R : F) (XXI), m. 206-9.degree., [.alpha.]D -64.degree. (c 1.0); 3,18-diacetate, [.alpha.]D -55.degree. (c 1.18); 3 acetate 18-benzoate, [.alpha.]D -52.degree. (c 0.87). XXI (50 mg.), 50 mg. KOH, and 10 ml. aq. alc. refluxed 2 hrs. gave the 3-hydroxy fluorohydrin, m. 258-9.degree. (MeOH), [.alpha.]D -63.degree. (c 0.77). The XX residues (398 g.) in 5 ml. dioxane treated 18 hrs. at 20.degree. with 400 mg. 2,3-dichloro-5,6-dicyanobenzoquinone and the mixt. poured into Et2O, the NaOH-washed soln. evapd., and the residue adsorbed on 40 g. Al2O3, eluted with C6H6-Et2O and the eluate (90 mg.) crystd. from MeOH gave the aldehyde (XVII, R : O), m. 197-9.degree., [.alpha.]D -41.degree. (c 0.98). Further elution with Et2O gave more XXI (total yield 590 mg.). XV (1.97 g.) in 200 ml. Et2O treated 90 min. with 2 ml. BF3-Et2O and chromatographic sepn. of the products gave XVIII and XIX in 1.17 g. and 769 mg. yields, resp. Treatment of 500 mg. XV in 16 ml. CH2Cl2 and 32 ml. Me2CO with 0.5 ml. 1.5M aq. HClO4 for 10 min. at 20.degree. gave 332 mg. XVIII. Although the results shed no light on the configuration of the 17a,18-diol (XX, R : OH) (XXII), m. 126-8.degree. (C6H14), [.alpha.]D -33.degree. (c 1.132), obtained previously (CA 49, 9685h) by the action of OsO4 in C5H5N in C6H6-dioxane on the 17a(18)-olefin. Acetylation of XXII gave the 3.beta.,18-diacetate, m. 218-10.degree., [.alpha.]D -22.degree. (c 0.90), hydrolyzed by KOH in aq. alc. to XV. The 18-acetate (200 mg.) in 10 ml. pyridine was treated at -40.degree. with 0.2 ml. SOCl2, the reaction mixt. poured into H2O, and the product extd. with pentane and chromatographed over deactivated Al2O3 to give 158 mg. XXIII, oil, [.alpha.]D -60.degree. (c 1.54). The 18-aldehyde (XVI) (250 mg.) and 1.5 ml. 60% N2H4.H2O heated 1 hr. at 120.degree. in HOCH2CH2OH and the mixt. heated (N atm.) to 200.degree. with 1 g. KOH and kept 2 hrs. at 200.degree., extd. with EtO and the isolated product acetylated gave the 17a.alpha.-methyl deriv. (XXIV, 17a.alpha.-Me), m. 154-5.degree. (MeOH), [.alpha.]D -60.degree. (c 0.85). The 17a(18)-olefin (250 mg.) in 10 ml. AcOH hydrogenated 7 hrs. over 150 mg. 10% Pd-C and the product crystd.

L13 ANSWER 11 OF 34 CAPLUS COPYRIGHT 2001 ACS (Continued)
from MeOH gave 222 mg. XXIV (17a.beta.-Me), m. 175-6.degree., [.alpha.]D -49.5.degree. (c 1.07). The 18-Me signals in XXIV are split into doublets by spin-spin coupling with the 17a proton and appear in a region contg. 19-Me and 27-Me signals. The tabulated .tau. values are to be regarded as tentative.

L13 ANSWER 12 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1965:439307 CAPLUS
DOCUMENT NUMBER: 63:39307
ORIGINAL REFERENCE NO.: 63:7066a-c
TITLE: Lysergic acids
INVENTOR(S): Hofmann, Albert; Troxler, Franz
PATENT ASSIGNEE(S): Sandoz Ltd.
SOURCE: 3 pp.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CH 386440		19650415	CH	19600819

AB Substituted lysergic acids and dihydrolysergic acids are prepd. by sapon. of the corresponding carboxylic acid amides. Thus, 9.5 g. 1-methyldihydroergocryptine in 240 cc. EtOH was refluxed with 240 cc. 4N KOH in 50% MeOH for 20 hrs. to give 1-methyldihydro-d-lysergic acid, which was purified by dissolving in 10% methanesulfonic acid, filtering, and neutralizing. The pure product m. 335.degree., [.alpha.]20D -111 .+-. 20.0.degree. (c 0.05, pyridine). Similarly was prep. from 1-methyl-d-lysergic acid D-2-propanolamide a mixt. of 1-methyl-d-lysergic acid and 1-methyl-d-isolysergic acid (I) which was sepd. by soln. in concd. NH3 soln. and filtration through talc. The ammonium salt of I crystd., and was dissolved in water and treated with AcOH to obtain pure I, m. 215.degree., [.alpha.]20D 330 .+-. 10.degree. (c 0.2, MeOH). From 1-benzyldihydroergocryptine was prepd. 1-benzyl-9,10-dihydro-D-lysergic acid, m. 217-22.degree., [.alpha.]20D -106.degree. (c 0.5, pyridine).

L13 ANSWER 13 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1965:439306 CAPLUS
DOCUMENT NUMBER: 63:39306
ORIGINAL REFERENCE NO.: 63:7065c,7066a
TITLE: The structure of complex organic molecules by direct x-ray analysis
AUTHOR(S): Robertson, J. Monteath
CORPORATE SOURCE: Univ. Glasgow, UK
SOURCE: Proc. Robert A. Welch Found. Conf. Chem. Res. (1960), 4, 135-56, discussion 157-62
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A lecture on the structure of limonin, calycanthine, and echitamine.

L13 ANSWER 14 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1965:91207 CAPLUS
DOCUMENT NUMBER: 62:91207
ORIGINAL REFERENCE NO.: 62:16328g-h,16329a-g
TITLE: Jervine. XV. Hydrogenation of the 13,17a-double bond
AUTHOR(S): Wintersteiner, O.; Moore, M.
CORPORATE SOURCE: Squibb Inst. Med. Res., New Brunswick, NJ
SOURCE: Tetrahedron (1965), 21(4), 779-90
DOCUMENT TYPE: Journal
LANGUAGE: English
AB cf. CA 62, 9200f. N-Acetyltetrahydroisojervine (503 mg., CA 58, 2479f) in 5% KOH-MeOH refluxed (N atm.) 1 hr. and the H2O-washed product recrystd. from MeOH-EtOAc gave 364 mg. .alpha.,.beta.-unsatd. ketone (I, R = H) (II), m. 276-9.degree., [.alpha.]22D -12.7.degree. (c 0.883); triacetate (I, R = Ac) (III), m. 262-4.degree. (EtO-Ac-C6H14), [.alpha.]27D -27.4.degree. (c 0.948). II (149 mg.) in 15 ml. AcOH catalytically hydrogenated with 80 mg. prereduced PtO2 in 5 hrs. with 1.07 mole equivs. H and the filtered soln. evapd. the residue kept overnight in 50% aq. EtOH, and the cryst. deposit recrystd. from EtOAc gave 12 mg. II, converted to III for identification. The residue from the combined mother liquors acetylated and recrystd. from alc. and from EtOAcC6H14 yielded 37 mg. impure C/D trans linked isomer (IV, R = Ac), m. 226-9.degree., [.alpha.]22D -8.6.degree. (c 1.059, 1:1 MeOH-tetrahydrofuran), showing mutarotation in this solvent contg. 2% KOH from [.alpha.]21D 12.0 (c 1.075) to -24.2.degree. in 23 hrs. IV contained 70% starting material present as III. Part of IV equilibrated in alk. soln. and the product crystd. from EtOAc gave pure N-acetyl deriv. (V, R = H) (VI), m. 268-70.degree., [.alpha.]21D -39.degree.. Isolation of VI and the characteristic shape of the mutarotation curve left no doubt as to the identity of the hydrogenation product as IV. Accordingly the side chain in the parent ketone II must be .beta.-oriented and trans addn. to the double bond occurred. The formation of IV as the kinetically favored product was explained by the predominance of stereoelectronic over purely steric control of proton addn. of C-13 in the re-ketonization of an enolic intermediate arising by 1,4-addn. of H to the enone system of II. The observation that the hydrogenation of jervine (VII, R = R' = H, .DELTA.13-17a) afforded tetrahydrojervine (CA 37, 4072f) by cis(.alpha.,.alpha.)-addn. was confirmed, and the product characterized as diacetyltetrahydrojervine, m. 214-17.degree.. O,N-Diacetyljervine VII (R = R' = Ac, .DELTA.13-17a, 3.06 g.) in 300 ml. AcOH hydrogenated 22 hrs. with 1.54 g. prereduced Pt catalyst and the residue on evapn. of the filtered soln. taken up in EtOAc, dild. with C6H14 and the ppt. recrystd. from warm EtOAc, MeOH-EtOAc, and Me2CO, the product (168 mg., m. 240-4.degree.) chromatographed on Al2O3 and eluted in 49: 1 Et2O-MeOH gave the 3,N-diacetate (VIII), m. 240-3.degree., [.alpha.]28D -27.8.degree. (c 1.148), isomeric with IV, V and the 17-epimeric dihydro deriv. (IX). VIII gave a triacetate (X), [.alpha.]30D -23.3.degree.. Hydrolysis of VIII by boiling 30 min. in 5% KOH-MeOH gave the N-acetyl deriv. (XI), m. 220-1.degree. (EtOAc), [.alpha.]31D -27.3.degree. (c 0.952). Acetylation of XI gave an amorphous product with ir spectrum identical with that of X.

Mutarotation of VIII in 1:1 MeOH-tetrahydrofuran contg. 2% KOH gave initial [.alpha.]30-1D -35.0.degree. shifting to -38.9.degree. in 5 hrs. (c 1.389). The mixt. yielded the N-acetyl deriv. (XI). The mother liquor

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from VIII evapd. and the residue (2.5 g.) acetylated, chromatographed and the primary eluates rechromatographed gave almost pure triacetyltetrahydroisojervine (XIII), m. 170-2.degree., [.alpha.]30D 66.3.degree. (c 1.033). Further elution with 1:1 C6H6-Et2O gave IX triacetate, [.alpha.]28D -14.7.degree. (CHCl3), showing mutarotation in alk. MeOH-tetrahydrofuran, hydrolyzed in 5% KOH-MeOH to the N-Ac deriv.,
m. 235-9.degree., [.alpha.]25D -13.degree. (c 1.192). With O,N-diacetyljervine, the primary event in hydrogenation was the hydrogenolysis of the 17,23- ether linkage and the formation of a free 23-OH group. This may have been accompanied by deconjugation of the enone
grouping leading to 3,N-diacetyltetrahydroisojervine, isolated as XIII, or
followed by hydrogenation of the double bond and thus leading by trans (13.beta.,17a.alpha.)-addn. to the 3,N-diacetate of IX and to the configurationally as yet undefined new stereoisomer VIII. These results were discussed in terms of their dependence on the ease of protonation of the 17,23-ether O and the direction of polarization of the enone system before and after cleavage of the 17-O bond.

L13 ANSWER 15 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1965:91206 CAPLUS
DOCUMENT NUMBER: 62:91206
ORIGINAL REFERENCE NO.: 62:16328d-g
TITLE: Nitrogen-containing steroids. X. The conversion of halohydrins to aziridines and oxazolines
AUTHOR(S): Ponsold, Kurt; Groh, Helmut
CORPORATE SOURCE: Univ. Jena, Germany
SOURCE: Chem. Ber. (1965), 98(4), 1009-12
DOCUMENT TYPE: Journal
LANGUAGE: German
AB cf. CA 62, 10476e. 2.alpha.-Bromo-3.alpha.-cholestanol (I) (3.0 g.) in 60
cc. C5H5N treated 48 hrs. at 0.degree. with 2.0 cc. MeSO2Cl yielded 3.1 g.
methanesulfonate (II) of I, leaflets, m. 232-3.degree. (CHCl3-Me2CO), [.alpha.]20D 52.degree. (c 2, CHCl3). II (2.5 g.) in 150 cc. Me2SO stirred 4 hrs. at 80.degree. with 7.0 g. NaN3 gave 1.95 g. 2.alpha.-bromo-3.beta.-azidocholestane (III), m. 84.degree. (MeOH), [.alpha.]20D 10.degree. (c 2, CHCl3). III (2.0 g.) in 16 cc. C6H6 and 1.1
g. Ph3P refluxed about 0.5 hr. and evapd., and the crude triphenylphosphinimine dissolved in 15 cc. refluxing AcOH and refluxed 1 hr. with 5 cc. 48% HBr yielded 0.96 g. 2.alpha.-bromo-3.beta.-aminocholestane-HBr (IV.HBr), m. 285.degree. (EtOH). IV.HBr (0.5 g.) in 50 cc. boiling EtOH with 0.5 g. KOH in a little EtOH yielded 0.25 g. IV, m. 116.degree. (MeOH). III (3.0 g.) in 100 cc. AcOEt hydrogenated 2 hrs. at room temp. over 0.4 g. PtO2 yielded 2.5 g. IV, m. 112-14.degree. (MeOH), [.alpha.]20D 5.degree. (c 1, C5H5N). IV (0.90 g.), 1 g. KOH, and 10 cc. MeOCH2CH2OH refluxed 20 min. yielded 0.55 g. 2.beta.,3.beta.-iminocholestane (V), m. 104-5.degree.. V (0.20 g.) in 2 cc. C5H5N treated
1 hr. at room temp. with 2 cc. Ac2O yielded 0.18 g. N-Ac deriv. of V, m. 134-5.degree. (Me2CO), [.alpha.]20D 37.degree. (c 1, CHCl3). IV (0.5 g.),
5 cc. C5H5N, and 5 cc. Ac2O yielded overnight at room temp. 0.45 g. N-Ac deriv. (VI) of IV, needles, m. 199.degree. (decompn.) (Et2O), [.alpha.]25D
-9.degree. (c 1, CHCl3). VI (0.50 g.), 1 g. KOH, and 10 cc. MeOCH2CH2OH refluxed 15 min. yielded 0.34 g. 2'-methyloxazolino[5',4'2,3]cholestane (VII), needles, m. 89.degree. (Me2CO), [.alpha.]25D 52.degree. (c 1, CHCl3). VII (0.1 g.) in refluxing Et2O with picric acid in Et2O gave 0.11
g. picrate, needles, m. 204-5.degree. (Me2CO), [.alpha.]20D -30.degree. (c
1, CHCl3). The reaction of the diaxial 2.beta.-bromocholestan-3.alpha.-ol methanesulfonate with NaN3 yielded not the expected diaxial haloazide but rather an unsatd. azide.

L13 ANSWER 16 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1965:82827 CAPLUS
DOCUMENT NUMBER: 62:82827
ORIGINAL REFERENCE NO.: 62:14774c-h,14775a-b
TITLE: C-Nor-D-homosteroids and related alkaloids. III. C-9 Configuration of jervine and related alkaloids
AUTHOR(S): Masamune, Tadashi; Takasugi, Mitsuo; Mori, Yoichi
CORPORATE SOURCE: Hokkaido Univ., Sapporo, Japan
SOURCE: Tetrahedron Letters (1965), (9), 489-95
DOCUMENT TYPE: Journal
LANGUAGE: English
AB cf. CA 61, 702d, 8351d. It was shown that jervine (I, R' = O) (II) and veratra nine (III, .delta.5) (IV) have the B/C trans configuration. III (no .delta.5), m. 191-3.degree., treated with (CH2CO)2NCl, the N-chloro deriv. treated with NaOMe and subsequently hydrolyzed gave an aldehyde, degraded with BuNO2 and BuONa to an oxime, m. 228-32% hydrolyzed to give a
ketone (V), C21H28O2, m. 169-71.degree., .nu. 1667, 1597 cm.-1, .lambda. 258 m.mu. (.epsilon. 15,000), N.M.R. .tau. 7.42, 7.56, 9.05, identical with the ketone prepd. from hecogenin by Mitsuhashi and Shibata (CA 61, 13374b). Birch redn. of IV with Li in EtNH2 in the presence of Me2CHOH yielded 33% main product (VI), m. 182-4.degree., .lambda. 210 m.mu. (.epsilon. 16,000); triacetyl deriv. m. 144-6.degree., .tau.4.58, 8.47. Catalytic hydrogenation of VI in AcOH over prereduced PtO2 gave the compds. VII, m. 174-6.degree. Rf 0.41, and VIII, m. 181-3.degree., Rf 0.58
(CA 61, 8351d). Treatment of 11-deoxojervine (IX) with Li and EtNH2 yielded 2 isomeric substances X, C27H43NO2, m. 157-9.degree., Rf 0.78, .nu. 3300, 1715, 1063, 877, 806 cm.-1, and XI, m. 190-2.degree., [.alpha.]D -53.6.degree. (95% alc.), Rf 0.56, v 3400, 1063, 883, 806 cm.-1
Hydrogenation of X gave a good yield of the 5,6-dihydro deriv. (XII), C27H45NO2, m. 155-7.degree., [.alpha.]D -59.4.degree., .nu. 3300, 1719, 1032, 878 cm.-1, also produced in good yield by direct hydrogenation of IX. On acetylation XII and XI gave the corresponding triacetyl derivs., m. 157-9.degree. .tau. 4.93, 5.17, 5.35, 8.34, 9.28, and m. 188-90.degree., [.alpha.]D - 10.2.degree. .tau. 4.61, 8.47, 9.02. The N.M.R. spectra indicated the presence of a C-18 Me group and suggested the
configuration of the C/D ring linkage. Hydrogenation of XI gave mainly VII, m. 172-4.degree. Rf 0.43, .nu. 3300, 1041, 855 cm.-1, .tau. 8.35, 9.25. Oxidn. of diacetyljervin-11.beta.-ol with CrO3-C5H5N gave diacetyljervine, indicating that jervin-11.beta.-ol (XIII) has the same configuration at C-9 as II. Birch redn. of XIII gave 5% triol (XIV) and 50% diol (XV). XIV, m. 217-18.degree., Rf 0.15, was also obtained by redn. of 8,9-dihydroisojervine with LiAlH4. The diol XV, C27H43NO2, m. 198-9.degree., [.alpha.]D -64.9.degree., Rf 0.48, .nu. 3400, 1064, 885, 806 cm.-1, gave a triacetyl deriv., m. 188-90.degree., [.alpha.]D -12.3.degree., .tau. 4.58, 8.47, 9.02, showing cleavage of the ether bond and removal of the 11-OH group. Hydrogenation of XV gave 2 cryst. compds., XIII C27H45NO2, m. 184-6.degree., Rf 0.50, v 3400, 3300, 1041, 885 cm.-1, and VIII, C27H47NO2, m. 180-2.degree., Rf 0.59, v 3300, 1715, 1039, 878 cm.-1 XVI gave a triacetyl deriv., m. 201-4.degree., showing almost the same N.M.R. spectrum as that of the corresponding deriv. of XV.
The spectrum of the triacetyl deriv. of VIII exhibited no sharp absorption
near .tau. 8.4, suggesting satn. of the C-12, C-13 double bond. The above
transformations involved no reaction affecting the C-9 configuration and established the B/C configuration of II, 11-deoxojervine, and IV.

L13 ANSWER 16 OF 34 CAPLUS COPYRIGHT 2001 ACS (Continued)

L13 ANSWER 17 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1965:82826 CAPLUS
DOCUMENT NUMBER: 62:82826
ORIGINAL REFERENCE NO.: 62:14773h,14774a-c
TITLE: Steroids in the adsorbed state. I. Adsorption of certain 5.alpha.- and 5.beta.-cholanic and etianic acid derivatives on activated alumina
AUTHOR(S): Hodosan, Francisc; Pop-Gocan, Alexandra
CORPORATE SOURCE: Acad. R.P.R., Cluj
SOURCE: Studii Cercetari Chim. Bucharest (1964), 13(8-9), 559-66
DOCUMENT TYPE: Journal
LANGUAGE: Romanian
AB Steroids of medium and low polarity of the 5.alpha.- and 5.beta.-cholane series possessing functional groups which can participate in substitution, elimination, hydrolysis, redn., and oxidn. reactions, were adsorbed on a thin layer of Al2O3 and subjected to the action of several reagents. The following were screened: methyl 3.alpha.-acetoxy-, methyl-3.beta.-acetoxy-, methyl 6.alpha.-acetoxy-, methyl 12.alpha.-acetoxy-, methyl 3.alpha.,6.alpha.-diacetoxy-, methyl 3.alpha.,12.alpha.-diacetoxy-, methyl 3.alpha.-tosyloxy-, methyl 6.alpha.-tosyloxy-, methyl 12.alpha.-tosyloxy-, methyl 3.alpha.,6.alpha.-ditosyloxy-, methyl-3-oxo-, methyl 6-oxo-, methyl 12-oxo-, methyl 3,6-dioxo-, methyl 3,12-dioxo-5.alpha.- and --------5.beta.-cholanates, resp., and also methyl 3.beta.-acetoxy-5.alpha.- and -5.beta.-etianates. Plots of Rm values of the monosubstituted methyl 5.beta.-cholanates against the position of the substituents, showed that the substituents in the 3.alpha. and 6.alpha. positions affected the adsorptivity as follows: O > OTs > OAc > Co2Me, independent of the adsorbent activity, in contrast with those at C-12, which show some inversion. The oscillation of Rm values of 12.alpha. substituted compds. around those of 3.alpha. and 6.alpha. derivs. favored the conception that the migration of a substance on the adsorbent surface is detd. by a rel. large no. of antagonistic effects. The 6.alpha.-substituted compds. were more strongly absorbed than the corresponding 3.alpha. compds. The skeleton-adsorbent-interaction effect proposed as an explanation was illustrated by means of the Rm values of the 3.alpha.- and 3.beta.-substituted methyl 5.beta.-cholanates. Also considered were the homology effect, and the steric effect which acted in opposition to the former two effects.

L13 ANSWER 18 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1965:82825 CAPLUS
DOCUMENT NUMBER: 62:82825
ORIGINAL REFERENCE NO.: 62:14773h,14774a-c
TITLE: Steroids in the adsorbed state. I. Adsorption of certain 5.alpha.- and 5.beta.-cholanic and etianic acid derivatives on activated alumina
AUTHOR(S): Hodosan, Francisc; Pop-Gocan, Alexandra
CORPORATE SOURCE: Acad. R.P.R., Cluj
SOURCE: Rev. Roumaine Chim. (1964), 9(8-9), 523-30
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Steroids of medium and low polarity of the 5.alpha.- and 5.beta.-cholane series possessing functional groups which can participate in substitution, elimination, hydrolysis, redn., and oxidn. reactions, were adsorbed on a thin layer of Al2O3 and subjected to the action of several reagents. The following were screened: methyl 3.alpha.-acetoxy-, methyl-3.beta.-acetoxy-, methyl 6.alpha.-acetoxy-, methyl 12.alpha.-acetoxy-, methyl 3.alpha.,6.alpha.-diacetoxy-, methyl 3.alpha.,12.alpha.-diacetoxy-, methyl 3.alpha.-tosyloxy-, methyl 6.alpha.-tosyloxy-, methyl 12.alpha.-tosyloxy-, methyl 3.alpha.,6.alpha.-ditosyloxy-, methyl-3-oxo-, methyl 6-oxo-, methyl 12-oxo-, methyl 3,6-dioxo-, methyl 3,12-dioxo-5.alpha.- and --------5.beta.-cholanates, resp., and also methyl 3.beta.-acetoxy-5.alpha.- and -5.beta.-etianates. Plots of Rm values of the monosubstituted methyl 5.beta.-cholanates against the position of the substituents, showed that the substituents in the 3.alpha. and 6.alpha. positions affected the adsorptivity as follows: O > OTs > OAc > Co2Me, independent of the adsorbent activity, in contrast with those at C-12, which show some inversion. The oscillation of Rm values of 12.alpha. substituted compds. around those of 3.alpha. and 6.alpha. derivs. favored the conception that the migration of a substance on the adsorbent surface is detd. by a rel. large no. of antagonistic effects. The 6.alpha.-substituted compds. were more strongly absorbed than the corresponding 3.alpha. compds. The skeleton-adsorbent-interaction effect proposed as an explanation was illustrated by means of the Rm values of the 3.alpha.- and 3.beta.-substituted methyl 5.beta.-cholanates. Also considered were the homology effect, and the steric effect which acted in opposition to the former two effects.

L13 ANSWER 19 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1965:720 CAPLUS
DOCUMENT NUMBER: 62:720
ORIGINAL REFERENCE NO.: 62:110d-e
TITLE: Mass-spectrometric study of carbohydrates: methyl ethers of disaccharides
AUTHOR(S): Chizhov, O. S.; Polyakova, L. A.; Kochetkov, N. K.
SOURCE: Dokl. Akad. Nauk SSSR (1964), 158(3), 685-8
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Mass spectra were obtained of .alpha.-Me hepta-O-methyl-gentiobioside (I), .alpha.,.beta.-Me hepta-O-methylmelibioside (II), .alpha.,.beta.-Me hepta-O-methylcellobioside (III), .alpha.,.beta.-Me hepta-O-methylmaltoside (IV), .alpha.,.beta.-Me hepta-O-methyllactoside (V), and .alpha.-Me hepta-O-methylsophoroside (VI). The more conspicuous differences between the mass spectra arise from the different positions of the O bridge, which is 1 .fwdarw. 6 in I and II, 1 .fwdarw. 4 in III, IV, and V, and 1 .fwdarw. 2 in VI. Peaks at m/e = 380 and 305 are observed in the spectra of III, IV, V, and VI only, m/e = 380 being ascribed to loss of C atoms 5 and 6 together as methoxyethanal from ring B, and m/e = 305 to the further loss of (MeO)2CH.bul.. A peak at m/e = 161 is much stronger in III, IV, and V than in VI, and is attributed to loss of the ring A radical from the m/e = 380 fragment. Peaks at m/e = 279 and 353 are thought to be analogous to the peaks at m/e = 75 and 149 in methylated glucose; m/e = 279 probably arises from cleavage in ring A, and m/e = 353, which occurs only in I and II, from ring B cleavage.

L13 ANSWER 20 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1965:719 CAPLUS
DOCUMENT NUMBER: 62:719
ORIGINAL REFERENCE NO.: 62:110b-d
TITLE: Highly sensitive photoresistors and photocells of roasted CdS and some of their reversible aging processes
AUTHOR(S): Kynev, St.; Stoyanov, V.; Shekerdzhiiski, V.
CORPORATE SOURCE: Phys. Inst., Sofia, Bulg.
SOURCE: Acta Phys. Polon. (1964), 25(3), 313-21
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB A method of simply and quickly prepg. CdS tablets suitable for the production of photoresistors makes use of any CdS or CdS contg. CdSO4 that can be had from Soviet industry. The prepn. involves compression of the CdS power at 100 kg./sq. cm. followed by heating in an Ar atm. at 850-900.degree. for 1/2 hr. The photosensitivity of the material is increased by Cu addn. The high-resistance photosensitive sinter obtained is used to prep. by known methods photoresistors having improved mech. stability. On exposure to light these photoresistances age, with photocurrents decreasing 5-30% for the first 100-200 working hrs., and no change thereafter (measured at 2000 hrs.). Heating an already aged photoresistance some 10 sec. restores it to its initial state, and it can be repeated 7-8 times. The theory of the reversible aging is discussed. The photoresistors capable of prepn. by methods described can be used in automatic control and measuring devices and as a result of their feeding and intensifying ability they can be used as photomultipliers. Some properties of the photoresistors are given.

L13 ANSWER 21 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1964:404373 CAPLUS
DOCUMENT NUMBER: 61:4373
ORIGINAL REFERENCE NO.: 61:702d-g
TITLE: C-Nor-D-homosteroids and related alkaloids. II. A new alkaloid from Veratrum species, 11-deoxojervine
AUTHOR(S): Masamune, Tadashi; Mori, Yoichi; Takasugi, Mitsuo; Mural, Akira
CORPORATE SOURCE: Hokkaido Univ., Sapporo, Japan
SOURCE: Tetrahedron Letters (1964), (15-16), 913-17
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB cf. CA 58, 11437c. The ground roots of V. album var grandiflorum gave 0.08% veratramine and 0.3% new alkaloid (Ia) (R = H2, R1 = H) (1), but no jervine (Ia) (R = O, R1 = H) (II). I m. 237-8.degree., [.alpha.]D -33.2.degree. (EtOH); O,N-diacetate m. 163-4.degree. and 195-7.degree., [.alpha.]D 1.1.degree.. I was recovered on redn. with LiAlH4 or Li in liquid NH3. Catalytic redn. of jervin-11.beta.ol (Ia) (R = .beta.-OH, H, R1 = H) (III) in HOAc in the presence of Pt gave the 5,6-dihydro deriv. of Ia (R = .beta.-OH, H, R1 = Ac) (IV), m. 124-7.degree. and 189-91.degree.; O,O,N-triacetate m. 184-6.degree.. Birch redn. of III in MeOH gave V, m. 148-50.degree.. On refluxing with HCl in MeOH, III gave 35% veratramine. The CO group of II did not form an oxime. Clemmensen redn. of 12,13-dihydrojervine was unsuccessful. Wolff-Kishner redn. of II gave VI, m. 211-13.degree., [.alpha.]D +3.5.degree., and m. 236-8.degree.. VI gave an O,O,N-tri-acetate, m. 116-18.degree., [.alpha.], 46.degree.. Ultraviolet, infrared, and nuclear magnetic resonance data were used to confirm the structure of the compds.

L13 ANSWER 22 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1964:91113 CAPLUS
DOCUMENT NUMBER: 60:91113
ORIGINAL REFERENCE NO.: 60:15944d-g
TITLE: The Veratrum alkaloids
AUTHOR(S): Poethke, W.; Kuntze, M.; Kerstan, W.
CORPORATE SOURCE: Friedrich-Schiller Univ., Jena, Germany
SOURCE: Tagungsber., Deut. Akad. Landwirtschaftswiss. Berlin (1961), No. 27, 91-9
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Esters of rubijervine, so far not found in the Veratrum species, were prepd., and the amorphous alkaloids of Veratrum album were chromatographed to give rubijervine (I), isorubijervine (II), jervine (III), and 3 unknown alkamines. I and III were each treated with the desired acid chloride in pyridine; warming of I must be avoided. Thus prepd. were I diacetate (IV), m. 161-3.degree. (decompn.) (alc.); I dipropionate, m. 217-18.degree. (decompn.) (acetone); I bis(dl-.alpha.-methylbutyrate) (V), m. 195-6.degree. (decompn.) (acetone); dipropionyljervine, m. 121.degree. (decompn.) (dil. MeOH); and bis(dl-.alpha.-methylbutyryl)jervine, m. 174-6.degree. (decompn.)(dil. MeOH). I, IV, and esp. V depressed the blood pressure of cats at doses of 0.03 mg./kg. Alk. hydrolysis of the amorphous alkaloids obtained from Veratrum album gave besides germine another amorphous fraction, which was paper-chromatographed; the following solvent systems gave partial sepns., showing the presence of I, II, III, and 2 other alkamines designated A and C: 90:10 CHCl3-dioxane; 75:25 CHCl3-MeCOEt, 90:10 or 80:20 CHCl3-C6H6, and 25:75 CH2:CHCl-EtOAc, all mixts. being satd. with HCONH2. Germine, isogermine, protoverine, zygadenine, and an alkaloid designated Alkamine B did not travel with any of these solvent systems but could be sepd. by means of 40:50:10 BuOH-H2O-AcOH. Crystn. of the hydrolyzed amorphous fraction from acetone and chromatography on an acidic Al2O3 column with CHCl3 as eluent to which increasing quantities of EtOH were added yielded a mixt. of I and II (sepd. by fractional crystn. from EtOH into I, m. 23942.degree., and II, needles m. 216-18.degree. and prisms m. 237-8.degree.), III (m. 241-3.degree.), amorphous A, and cryst. B, m. 259-62.degree. (acetone). Chromatography on HCONH2-treated silica gel with CHCl3 + 1% EtOH as eluent gave good sepns. and yielded cryst. A, C27H43O4N, m. 115-18.degree., crystd. by slow evapn. of its acetone-ether soln., as well as C, m. 215-17.degree. (acetone-ether).

L13 ANSWER 23 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1964:91112 CAPLUS
DOCUMENT NUMBER: 60:91112
ORIGINAL REFERENCE NO.: 60:15944c-d
TITLE: Degradation of solasodine
AUTHOR(S): Magyar, G.
CORPORATE SOURCE: Forschungsinst. Pharm. Ind., Budapest, Hung.
SOURCE: Tagungsber., Deut. Akad. Landwirtschaftswiss. Berlin (1961), No. 27, 225-7
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Acetylation of solasodine (I) with Ac2O in the presence of C5H5N, quinoline, collidine, NEt3, alkali carbonates, alk. earth carbonates, Na3PO4, Na, Mg, Fe, and some ion exchange resins was investigated. Optimum results were obtained with NEt3 in the presence of an inert solvent as PhMe. The product was O,N-diacetylsolasodine (II). The conversion of II into the pseudoacetamido deriv. followed by oxidn. was effected by known methods. Subsequent pyrolytic cleavage of the 16-acyloxy side chain gave an overall yield of 58% 5,16-pregnadien-3B-ol-20-one acetate. As in the degradation of I, pregna-5,16-dien-3.beta.-ol-20one propionate and butyrate were obtained from I and 5.beta.-pregn16-en-3.beta.-ol-20-one acetate and propionate from tomatidine.

L13 ANSWER 24 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1964:75519 CAPLUS
DOCUMENT NUMBER: 60:75519
ORIGINAL REFERENCE NO.: 60:13280h,13281a-c
TITLE: Study on alkaloids of Petilium eduardi
AUTHOR(S): Shakirov, R.; Nuriddinov, R. N.; Yunusov, S. Yu.
CORPORATE SOURCE: Inst. Chem. Vegetable Compds., Tashkent
SOURCE: Dokl. Akad. Nauk Uz. SSR (1963), 20(9), 23-6
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB From P. eduardi, imperialine (I) [ibid. 1961(4), 33; CA 57, 15165h], peimisine (II) (Chou, CA 41, 7677h), edpetilidine (III), edpetiline (IV), and alkaloids m. 247-51.degree. (V), m. 269-71.degree. (VI), and m. 228-31.degree. (VII), were isolated. The alkaloids (1.1-1.32%) were extd. from dry above-ground parts (alkalinized with aq. NH3) with CHCl3. By recrystn. of the Et2O-sol. alkaloids from Me2CO, I and III [C27H45NO2, m. 227-8.degree., [.alpha.]D -48.19.degree. (pyridine); hydrochloride m. 283-5.degree.; hydrobromide m. 270-2.degree.; hydriodide m. 262-3.degree.; methiodide m. 292-4.degree.; nitrate m. 225.degree. (decompn.)] were isolated. In III an OH group and 3 C-Me groups were present; N-Me was not found. Mother liquors were treated with 5% H2SO4 and, after alkalinization with NH3, extd. with petr. ether and then with Et2O. From the pert. ether-sol. portion V, and from the Et2O-portion V, VI, VII, a little addnl. I, and II [m. 267-9.degree. (MeOH), [.alpha.]D -44.62.degree. (EtOH); hydrochloride m. 250-2.degree.; hydrobromide m. 257-9.degree.; hydriodide m. 254-6.degree.; nitrate m. 230-2.degree.; oxime m. 190-1.degree.; hydrochloride of oxime m. 254.degree.; acetyl deriv. m. 238-40.degree.; N-Me deriv. m. 238-40.degree.] were obtained. II contained 4 C-Me groups. From the CHCl3-sol. portion of alkaloids IV [m. 272-6.degree. (MeOH), [.alpha.]D -57.89.degree. (MeOH); hydrochloride m. 220.degree.; hydrobromide m. 226.degree.; hydriodide m. 228.degree.; oxime m. 228-9.degree. (decompn.)] was obtained; tetraacetyl deriv. m. 224-6.degree.. Hydrolysis of IV with 10% H2SO4 gave I and D-glucose. Cf. CA 58, 10257e IV is the .beta.-D-glucoside of I.

L13 ANSWER 25 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1964:75518 CAPLUS
DOCUMENT NUMBER: 60:75518
ORIGINAL REFERENCE NO.: 60:13280f-h
TITLE: Total synthesis of dl-garryine and dl-veatchine
AUTHOR(S): Nagata, Wataru; Narisada, Masayuki; Wakabayashi, Toshio; Sugasawa, Tsutomu
CORPORATE SOURCE: Shionogi Co., Ltd., Osaka, Japan
SOURCE: J. Am. Chem. Soc. (1964), 86(5), 929-30
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB cf. ibid. 85(15), 2342-3(1963). I (Ms = mesyl) was converted in 56% overall yield into dl-dihydroveatchine (II) (R = CH2CH2OH), previously converted into garryine (Wiesner, et al., CA 48, 11433f) and into veatchine (Pelletier and Kawazu, CA 60, 3021c).

L13 ANSWER 26 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1963:66694 CAPLUS
DOCUMENT NUMBER: 58:66694
ORIGINAL REFERENCE NO.: 58:11437c-g
TITLE: Structure of isojervine
AUTHOR(S): Masamune, Tadashi; Takasugi, Mitsuo; Suzuki, Hiroshi; Kawahara, Shozo; Gohda, Masatoshi; Irie, Toshi
CORPORATE SOURCE: Hokkaido Univ., Sapporo
SOURCE: Bull. Chem. Soc. Japan (1962), 35, 1749-50
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB The structure I is found to be consonant with all chem. and spectral data for isojervine, C27H39O3N, which is a secondary base with two acylable hydroxyl groups and one .alpha.,.beta.-unsatd. oxo group, p 1684, 1630, and 1063 cm.-1, .lambda. 330 m.mu. (.epsilon. 250), 252 m.mu. (inflection, .epsilon. 2900), 211 m.mu. (.epsilon. 9000). Redn. of I with Li and MeOH in NH3 at -70.degree. afforded .alpha.-dihydrojervinol. Oppenauer oxidn. of I with cyclohexanone and Al isopropoxide gave isojervone, m. 112-14.degree.; [.alpha.]d 140.degree. (EtOH), 1682, 1642, and 1620 cm.-1; .lambda. 234 m.mu. (.epsilon. 22,000). Hydrogenation of I over Pt in HOAc gave dihydroisojervine (II), m. 153-5.degree. and 171.5-2.5.degree., v 1679, 1625, and 1040 cm.-1, .lambda. 238 m.mu. (.epsilon. 9400). ppenauer oxidn. of II produced dihydroisojervone, m. 108-10.degree., v 1712, 1687, and 1629 cm.-1, .lambda. 238 m.mu. (.epsilon. 9900). Hydride redn. of I yielded isojervinol, m. 210-11.degree., .lambda. 212 m.mu. (.epsilon. 6400). The spectral data suggested a double bond at C8-C9. Birch redn. of II gave .alpha.-tetrahydroisojervine (III), m. 147-9.degree., 1731 cm.-1, and .beta.-tetrahydroisojervine (IV), m. 138-42.degree. (CHCl3 addn. compd.); v 1741 cm.-1 Neither the triacetate of III, m. 179-82.degree., nor the triacetate of IV, m. 168-8.5.degree. was identical with 22,27-imino-17(20)-jervene-3,23-diol-11-one triacetate. Treatment of II with N tert-BuOK in refluxing tert-BuOH under N 1 hr. yielded V, m. 142-4.degree., v 1670, 1621, and 1036 cm.-1, CHCl3, 1678 and 1630 cm.-1; .lambda. 239 m.mu. (.epsilon. 8600). V was a weak tertiary base; the pKa of V, I, and II were 6.12, 6.92, and 7.08 in 50% EtOH. Acctylation of V with Ac2O and C5H5N at 100.degree. 3 hrs. gave a O,O-diacetate, p (CHCl3) 1725, 1685, and 1632 cm.-1; pKa, 4.47. Similar reactions, involving migration of 13(17) double bond to .alpha.,.beta.-position of the carbonyl group followed by cyclization, were observed with III and IV.

L13 ANSWER 27 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1963:66693 CAPLUS
DOCUMENT NUMBER: 58:66693
ORIGINAL REFERENCE NO.: 58:11436g-h,11437a-c
TITLE: Epimeric 2-bromo derivatives of 4,4-dimethylcholestan-3-one
AUTHOR(S): Malunowicz, I.
CORPORATE SOURCE: Coll. Agr., Wroclaw, Pol.
SOURCE: Bull. Acad. Polon. Sci. Ser. Sci. Chim. (1962), 10, 311-17
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Bromination of 3.39 g. 4,4-dimethylcholestan-3-one in HOAc and HBr by Br in HOAc at room temp., followed by NaBH4 redn. of the oily product in C6H6-MeOH yielded the bromohydrin, which was acetylated with Ac2O in C5H5N at room temp. and gave 2.8 g. 2.alpha.-bromo-3.beta.-acetoxy-4,4-dimethylcholestane (I), m. 169-70.degree. (EtOAc-MeOH), [.alpha.]D -17.degree.. I refluxed 24 hrs. with 5% alc. KOH yielded 2.beta.,3.beta.-epoxy-4,4-dimethylcholestane, m. 97-8.degree. (Me2CO-MeOH), [.alpha.]D 53% which was reduced by LiAlH4 in Et2O to yield the known 4,4-dimethylcholestan-3.beta.-ol. Treatment of 600 mg. I with Zn-HOAc under reflux 1 hr. gave 300 mg. 4,4-dimethylcholest-2-ene, m. 93-4.degree. (Me2CO), [.alpha.]D 29.degree., which was treated with BzOOH in CHCl3 at 0.degree. 48 hrs. to give 80% 2.alpha.,3.alpha.-epoxy-4,4-dimethylcholestane (II), m. 84-5.degree. (EtOAc-MeOH), [.alpha.]D 33.degree. which with LiAlH4 redn. yielded the known 4,4-dimethylcholestan-3.alpha.-ol. Shaking 500 mg. II with 10 ml. HBr in CHCl3 15 min. yielded 380 mg. 2.beta.-bromo-4,4-dimethylcholestan-3.alpha.-ol (III), m. 107-8.degree. (EtOAc-MeOH), [.alpha.]D 60.degree., which with Ac2O-C5H5N at room temp. yielded the 3.alpha.-acetate, which, refluxed with alc. KOH 24 hrs. yielded II. Oxidn. of 500 mg. III in C6H6HOAc with 4.5 ml. Kiliani's mixt. at room temp. 30 min. yielded 260 mg. 2.beta.-bromo-4,4-dimethyl cholestan-3-one (IV), m. 111-12.degree. (EtOAc-MeOH), [.alpha.]D 114.degree., .gamma. 1731 cm.-1, indicative of an equatorial Br. That the Br is .beta.-orientated is shown by (1) its high specific rotation; (2) the epimerization of IV with HBr in HOAc at 27.degree. 12 hrs. to yield the 2.alpha.-bromo,4-dimethylcholestan-3-one (V), m. 73-5.degree. (EtOAc-EtOH), [.alpha.]D 12.degree., y 1734 cm.-1; (3) NaBH4 redn. of IV to yield 2.beta.-bromo-4,4-dimethylcholestan-3.beta.-ol, m. 155-6.degree. (EtOH), [.alpha.]D 33.degree., which with CrO3 yielded IV, and when refluxed with alc. KOH gave 4,4-dimethylcholestan-3-one. Ring A must therefore be in the boat form. Redn. of V with NaBH4, followed by acetylation with Ac2O-C5H5N at room temp. yielded I. Thus the stable bromo ketone is the equatorial 2.alpha.-bromo ketone with ring A in the chair conformation.

L13 ANSWER 28 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1962:7883 CAPLUS
DOCUMENT NUMBER: 56:7883
ORIGINAL REFERENCE NO.: 56:1525h-i
TITLE: The alkaloids of the above-ground organs of Veratrum album. Composition of the alkaloids
AUTHOR(S): Jaspersen-Schib, R.; Flueck, H.
CORPORATE SOURCE: Pharm. Inst., Zuerich, Switz.
SOURCE: Pharm, Acta Helv. (1961), 36, 461-71
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The alkaloids are sepd. by partition chromatography by using kieselguhr. The properties of the pure alkaloids, with respect to paper chromatography, were studied, and their identification in the alkaloidal exts. of V. album was then examd. by the same procedure. The presence of germine, geralbine, neogermbudine, veratroylzygadenine, and protoveratrine A and B in 1 or more of the samples was demonstrated. In all the exts. examd., 1 unknown alkaloid (alkaloid Y) was found. The most toxic exts. contained ester alkaloids. Expts. with isolated pieces of the first stomach as well as the uterus of the cow, treated with powdered leaves and solns, of five exts., showed a decrease of the contractions. A sample contg. chiefly ester alkaloids increased the contractions.

L13 ANSWER 32 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1958:79225 CAPLUS
DOCUMENT NUMBER: 52:79225
ORIGINAL REFERENCE NO.: 52:14078e-f
TITLE: Methylnaphthoquinone and methylnaphthoquinone sodium bisulfite (vitamin K)
AUTHOR(S): Hahn, I.; Scheunert, A.; Seel, H.
CORPORATE SOURCE: Anstalt Vitaminforsch. Vitaminprufung, Potsdam-Rehbrucke, Germany
SOURCE: Pharm. Zentralhalle (1956), 95, 138-43
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB A description of menadione and menadione Na bisulfite as they will appear in a supplement to the German pharmacopeia (D.A.-B. VI). Most of the data correspond to those in U.S.P. XV, but in addn. color tests are described.

L13 ANSWER 33 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1957:25595 CAPLUS
DOCUMENT NUMBER: 51:25595
ORIGINAL REFERENCE NO.: 51:5101i,5102a-b
TITLE: Initial study of the structure of a new antibiotic, congocidine
AUTHOR(S): Julia, Marc; Joseph, Nicole
SOURCE: Compt. rend. (1956), 243, 961-4
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Congocidine (I) is progressively degraded in base to C15H20O3N6 (II), NH3, and glycocyamidine (III). Further hydrolysis of II gave C15H19O4N5 (IV) and NH3. More drastic degradation of IV gave C12H14O3N4 (V) and .beta.-alanine. Thus, I was given the formula C18H26O3N10; HCl salt, m. 228.degree.; H2SO4 salt, m. 288.degree.; methyl orange salt, m. 224.degree.; picrate, m. 273.degree.. I in N NaOH at 20.degree. evolved NH3 and solid II, m. 263.degree.; picrate, m. 242.degree.; benzoate, m. 265.degree.. The filtrate was neutralized to give III; picrate, m. 218.degree.; HCl salt, m. 210.degree.. II in boiling N NaOH evolved NH3 and the solid IV sepd. as the monohydrate, m. 167.degree.; picrate, m. 250.degree.. If IV were boiled in 10N NaOH 2.5 hrs., then acidified with H2SO4, V.H2SO4, m. 240.degree., was obtained. .beta.-Alanine was also found in the mixt.

L13 ANSWER 34 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1957:25594 CAPLUS
DOCUMENT NUMBER: 51:25594
ORIGINAL REFERENCE NO.: 51:5100g-i,5101a-i
TITLE: Jervine. X. Quaternary dihydro-1,3-oxazine salts as intermediates in the jervisine rearrangement
AUTHOR(S): Wintersteiner, O. P.; Moore, M. L.
CORPORATE SOURCE: Squibb Inst. for Med. Research, New Brunswick, NJ
SOURCE: J. Am. Chem. Soc. (1956), 78, 6193-9
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB cf. C.A. 50, 13057g. N-Acetyljervine (4.88 g.) in 125 cc. abs. MeOH satd. at 0.degree. with gaseous HCl kept 1 hr. at room temp. and evapd. to dryness in vacuo, the residue distributed between 500 cc. CHCl3 and 300 cc. H2O, the aq. layer extd. with 75 cc. CHCl3, the combined CHCl3 exts. washed with N HCl, aq. Na2CO3, and H2O, dried, and evapd. to dryness, and the residue (2.8 g.) recrystd. from MeOH-EtOAc yielded 1.56 g. N-acetylisojervine, m. 203-4.degree. (all m.ps. are cor.); the fine cryst. ppt. which had appeared in the aq. phase filtered and washed with cold H2O gave 1.65 g. quaternary chloride (I) (R = H and X = Cl) (II), m. 244-6.degree.; 2nd crop, m. 246-50.degree., 381 mg. II in AcOH ozonized, dild. with H2O, and distd., and the distillate treated with alc. dimedon gave only a few mg. trimeric self-condensation product of dimedon, m. 175-7.degree.. II (50 mg.) in 5 cc. MeOH treated at room temp. dropwise with 6 cc. 2N Na2CO3, dild. with 30 cc. H2O, and extd. with Et2O, and the ext. worked up yielded 32 mg. jervisine 17-monoacetate, platelets, m. 250-3.degree. (from Me2CO-Et2O-pentane), [.alpha.]D22 -134.degree. (c 0.861, CHCl3). II (1.64 g.) in 150 cc. warm EtOH dild. with 12 cc. H2O, the soln. cooled, added to 960 mg. prereduced PtO2 in 10 cc. EtOH, and hydrogenated 70 min., the cryst. ppt. dissolved by adding 150 cc. H2O with slight warming, the soln. filtered from the catalyst and concd. in vacuo to a small vol., and the ppt. isolated by centrifuging gave 989 mg. HCl salt (III) of the tertiary base (IV) of II, m. 312-13.degree. (sometimes up to 320.degree.), [.alpha.]D25 -69.degree. (c 0.401, 80% EtOH). III (316 mg.) in 50 cc. MeOH and 20 cc. H2O treated with excess aq. NaHCO3 with stirring and the product isolated with CHCl3 yielded 212 mg. IV.0.5H2O, square platelets, m. 154-9.degree., [.alpha.]D25 -80.degree. (c 0.524, CHCl3). III treated with N KOH in MeOH at room temp. or reflux (3 hrs.) gave IV. III refluxed 2 hrs. with 3:1:1 EtOH-H2O-concd. HCl or refluxed 4 hrs. with 1% 2,4-(O2N)2C6H3NHNH2 in 1% HCl was recovered unchanged. IV (48 mg.) in 2.5 cc. 10% AcOH refluxed 3 hrs. with an equal vol. concd. HCl, basified, and extd. with CHCl3 yielded 24 mg. unchanged IV, m. 148-53.degree.. IV treated with Ac2O-pyridine gave IV 3,23-diacetate (V), clusters of needles, m. 201-2.degree. (from aq. and then abs. MeOH), [.alpha.]D25 -77.degree. (c 0.826). V treated 18 hrs. at room temp. with 5% KOH in MeOH yielded IV.0.5H2O. V in Et2O treated with HCl in Et2O gave V.H Cl, m. 247-52.degree. (from aq. MeOH). V in EtOH treated with 5N HCl and the EtOH boiled off quickly gave O-deacetylated III.2H2O. IV (42 mg.) treated with 2 cc. HClO4-contg. acetolysis reagent and the ppt. centrifuged after short standing and washed with EtOH gave V.HClO4, m. 281-3.degree. (from MeOH), [.alpha.]D23 -60.degree. (c 0.443, 80% EtOH). I (R = Ac, X = ClO4) (192 mg.) in 30 cc. 93% EtOH hydrogenated over 123 mg. prereduced PtO2 until 1.3 mole equivs. H had been absorbed gave V.HClO4, m. 265-7.degree., which decompd. with NaHCO3 yielded V. V (201 mg.) in 7 cc. Ac2O, 3 cc. AcOH, and 0.1 cc. concd. H2SO4 kept 46 hrs. at room temp., the soln. cooled, basified weakly with NaHCO3, and extd. with CHCl3, and the aq. phase distd. (1/3) into 25 cc. 2,4-(O2N)2C6H3NHNH2 reagent yielded 10 mg. 2,4-(O2N)2C6H3NHN:CHMe, m. 158-60.degree. (from abs. EtOH); the CHCl3 exts. washed, dried, and evapd., and the yellow resinous residue (152 mg.) dissolved in C6H6 and chromatographed gave 21 mg. V and then 11-oxoveratramine 3,23-diacetate (VI), needles, m. 238-40.5.degree. (from EtOAc), [.alpha.]D23 -113.degree. (c 0.586, CHCl3). VI (15 mg.) treated with Ac2O-pyridine gave the N-Ac deriv., m. 242-4.degree., [.alpha.]D24 -27.degree. (c 0.481, CHCl3). VI (2.0 g.) in 28 cc. Ac2O, 12 cc. AcOH, and 0.2 cc. concd. H2SO4 kept 17 hrs. at room temp., poured into H2O and crushed ice, basified slightly with NaHCO3, and extd. with CHCl3, and the residue (1.81 g.) from the ext. chromatographed from C6H6 on 50 g. Al2O3 gave after small amts. of unidentified material over 1 g. of solid which triturated with MeOH yielded 30 mg. VII (R = Ac) (VIIa), m. 208-9.degree. (decompn.) (from MeOH). VIIa (4.8 mg.) in 1 cc. EtOH and 1 cc. N HCl refluxed 4 hrs., cooled, and treated with excess BaCl2 gave 1.60 mg. BaSO4. VIIa (2.10 mg.) in 5 cc. EtOH contg. a small drop of 5% alc. KOH showed after 1 hr. an absorption max. at 250 m.mu.. Further elution of the chromatographic column with MeOH and lyophilizing of the eluate gave Na salt (VIII) of VIIa. VIII (314 mg.) in 60 cc. 1:1:1 EtOH-H2O-20% HCl refluxed 1 hr., brought to pH 8 with Na2CO3, washed with CHCl3, reacidified, and treated with BaCl2 gave 86 mg. BaSO4; the residue (248 mg.) from the CHCl3 washing treated with Ac2O-pyridine yielded 214 mg. product which chromatographed on Al2O3 yielded 100 mg. stereoisomer of diacetyljervine, m. 226-30.degree. (from aq. EtOH), [.alpha.]D24 1.degree. (c 0.830, CHCl3).

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L3        4461975 S 4-6/NR
L4              7 S L1  SUB=L3 SAM
L5                STRUCTURE UPLOADED
L6              1 S L5  SUB=L3 SAM
L7            164 S L5 FULL SUB=L3

     FILE 'CAPLUS' ENTERED AT 10:04:37 ON 13 NOV 2001
L8             12 S L7/THU

     FILE 'USPATFULL' ENTERED AT 10:07:19 ON 13 NOV 2001
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     FILE 'MARPAT' ENTERED AT 10:09:29 ON 13 NOV 2001
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     FILE 'CAOLD' ENTERED AT 10:11:14 ON 13 NOV 2001
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     FILE 'CAPLUS' ENTERED AT 10:11:43 ON 13 NOV 2001
L13            34 S E1-E19/OREF
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L13 ANSWER 29 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1960:91847 CAPLUS
DOCUMENT NUMBER: 54:91847
ORIGINAL REFERENCE NO.: 54:17443g-i,17444a-e
TITLE: The general importance of the reaction of alkaloids of the secondary amine type with formaldehyde
AUTHOR(S): Auterhoff, H.; Moll, F.
CORPORATE SOURCE: Tech. Hochschule, Braunschweig, Germany
SOURCE: Arch. Pharm. (1960), 293, 132-41
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB The reaction of alkaloids of the secondary amine types with formaldehyde was investigated and it was assumed that this reaction was important in the biosynthesis of alkaloids. The nucleophilic strength of the alkaloids was detd. by the method of Brady and Cropper (CA 45, 8971e) with 2,4-(O2N)2C6H3Cl(I). Reaction velocity consts. of the reaction with I (k2 .times. 10-4) and consts. of the alk. dissocn. KB were detd. Cephaeline (II) (0.254 g.) treated in 50 ml. abs. Et2O with 0.10 ml. 35% HCHO 4 hrs. at room temp., and the solvent evapd., yielded 0.279 g. N-(hydroxymethyl)cephaeline (III), m. 138-142.degree., [.alpha.]20D -20.degree. (c 2, CHCl3), Rf (Partridge mixt.) 0.53. The paper chromatography showed uniformity of III, II and 35% HCHO reacted in NaOH soln. to give a mixt. of several products; dicephaelinomethane was not obtained. Coniine (IV) (contg. small amts. of .gamma.-coniceine) (0.304 g.) refluxed in 30 ml. Et2O with 0.2 ml. 35% HCHO and 0.5 g. K2CO3 30 min. yielded after evapn. of the solvent 0.270 g. N-(hydroxymethyl)coniine(V), yellow oil, n20D 1.4779, [.alpha.]20D 55.degree. (c 5.5). IV (0.272 g.) was heated with 0.032 g. paraformaldehyde and 5 mg. K2CO3 (VI) in a sealed tube 20 min. with shaking on a water bath; filtration and evapn. of Et2O yielded 0.185 g. diconiinomethane, oil, n20D 1.4852, [.alpha.]20D 49.degree., Rf 0.74. Conhydrine (VII) (0.5 g.) refluxed in 30 ml. Et2O with 0.60 ml. 35% HCHO and 1 g. VI 30 min., and the soln. evapd. after filtration yielded 0.564 g. N-(hydroxymethyl)conhydrine, yellow oil, n20D 1.4672, [.alpha.]20D 132.degree.(CHCl3), [.alpha.]20D 46.degree. (alc.), [.alpha.]20D 106.degree. (alc., after 3 days), Rf 0.64. The prepn. of diconhydrinomethane failed. Cytisine (VIII) (0.159 g.) treated 4 hrs. at room temp. with 0.075 g. 35% HCHO yielded after filtration and evapn. 0.173 g. N-(hydroxymethyl)cytisine m. 110-14.degree.. VIII (0.30 g.) treated at room temp. in 3 ml. abs. alc. with 0.147 g. 35% HCHO and 0.2 g. Ca(OH)2 12 hrs., 30 ml. Et2O and 0.1 g. VI added, and the mixt. filtered, yielded dicytisinomethane, m. 220-1.degree.. Jervine (50 mg.) in 80 ml. abs. Et2O and 0.10 ml. 35% HCHO treated 15 min. at 40.degree. yielded 54 mg. N-(hydroxymethyl)jervine, m. 168-70.degree. (decompn.). The prepn. of hydroxymethyl compds. of bornylisobornylamine and diisobornylamine failed. k2 .times. 10-4 and KB, resp., were detd. for the following compds.: piperidine, 175, 1.6 .times. 10-3(25.degree.); morpholine, 44, -; NHEt2, 2.2, 9.6 .times. 10-3(25.degree.); cephaeline, 2.9, -; emetine, 1.5, 2.3 .times. 10-7 (secondary N) (15.degree.) and 1.7 .times. 10-6 (tertiary N);

L13 ANSWER 29 OF 34 CAPLUS COPYRIGHT 2001 ACS (Continued)
coniine, 0.12, 1.3 .times. 10-3(25.degree.); conhydrine, 0.06; 2 .times. 10-4(18.degree.); jervine, about 0.04, -; diisobornylamine, about 0.002, -; theophylline, about 0.004, 1.9 .times. 10-14(25.degree.); theobromine, about 0.004, 1.3 .times. 10-14(18.degree.); yohimbine, about 0.002, 10-11 (secondary N) (23.degree.), and 2.8 .times. 10-7 (tertiary N). The following alkaloids were chromatographed on Partridge mixt. Detection was carried out with Dragendorff reagent (a), 0.2% ninhydrin in BuOH(b) and heating at 110.degree. or 1% sodium nitroprusside(c) and after treating with 10% NH4OH. The following data were obtained: IV, Rf 0.72, red-brown(a), violet(b); Rf 0.72, red-brown(a); .gamma.-coniceine, Rf 0.61, red-violet(a), red(c); VII, Rf 0.62, yellowish(a), violet(b). The influence of basicity and steric effects on the reactivity of the named alkaloids were discussed.

L13 ANSWER 30 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1960:91846 CAPLUS
DOCUMENT NUMBER: 54:91846
ORIGINAL REFERENCE NO.: 54:17443e-g
TITLE: Synthesis of some quaternary granatanol esters of pharmacological activity
AUTHOR(S): Matkovics, B.
CORPORATE SOURCE: Univ. Szeged, Hung.
SOURCE: Acta Univ. Szegediensis Acta Phys. et Chem. (1959), 5(No. 1-2), 47-52
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Pseudopelletierine was reduced to 3.beta.-granatanol (I), m. 99-100.degree. (picrate m. 264-5.degree.), by the method of Ciamician and Silber [Ber. 25, 1062(1892)] and to 3.alpha.-granatanol (II), hygroscopic [picrate 275-6.degree. (MeOH)], by the method of Alder and Dortmann (CA 49, 3984h). The granatanol obtained was extd. from benzene, the soln. dried over MgSO4, evapd. and distd. under reduced pressure. Recrystn. from a mixt. 2:4 anhyd. benzene-petr. ether gave a very pure alc. O-Acetyl-3.beta.-granatanol (III) b9 135-50.degree. (picrate m. 201.degree.), and O-acetyl-3.alpha.-granatanol (IV), b10 172-90.degree. (picrate m. 204.degree.), were prepd. by distn. of the corresponding alc. with glacial HOAc under reduced pressure. The following quaternary derivs. were also prepd.: N,N-di-Me deriv. of IV, m. 329.degree.; N-Me, N-Et deriv. of IV, m. 337.5.degree.; N-Me, N-Pr deriv. of IV, m. 240.degree.; N,N-di-Me deriv. of III, m. 331.degree.; N-Me, N-Et deriv. of III, m. 289.5.degree.; N-Me, N-Pr deriv. of III, m. 290.degree..

L13 ANSWER 31 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1958:79226 CAPLUS
DOCUMENT NUMBER: 52:79226
ORIGINAL REFERENCE NO.: 52:14078f-h
TITLE: Trichloroacetates of several alkaloids
AUTHOR(S): Poethke, W.; Kuntze, Martin
CORPORATE SOURCE: Friedrich Schiller Univ., Jena, Germany
SOURCE: Pharm. Zentralhalle (1957), 96, 463-6
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB The singular behavior of jervine trichloroacetate, which evolves CCl3CO2H (I) on melting or on long heating at 100.degree., occasioned the examn. of several other alkaloid trichloroacetates (II). Ephedrine (III) (0.5 g.) and 0.6 g. I dissolved in 4 ml. water by heating, cooled, rubbed, and the ppt. recrystd. from a small amt. of hot water gave III salt of I, m. 118-24.degree. (with considerable swelling). Similarly were prepd. the following salts of I d,l-III, m. 118-24.degree. (with considerable swelling); quinine di-I, m. 116-20.degree. (unsharp); brucine, m. 131-4.degree. (unsharp); strychnine (IV), m. 281-3.degree. (m.p. of IV since I was evolved between 250-60.degree.). Cond. measurements established that the II were strong electrolytes and true salts.

L13 ANSWER 5 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1966:404189 CAPLUS
DOCUMENT NUMBER: 65:4189
ORIGINAL REFERENCE NO.: 65:774b-h
TITLE: Photochemical reactions, XXXVI. Photolytic degradation of O-acetyljervine: structure and photochemical reactions of the nitrogen-free main products
AUTHOR(S): Bozzato, G.; Schaffner, K.; Jeger, O.
CORPORATE SOURCE: Eidg. Tech. Hochsch., Zurich, Switz.
SOURCE: Chimia (Aarau) (1966), 20(4), 114-16
DOCUMENT TYPE: Journal
LANGUAGE: German
AB cf. CA 64, 19714g. On irradiation in dioxane with light .lambda. 253.7 m.mu., O-acetyljervine (I) reacted to form II, III, and IV. The N-acetyl deriv. (V) was photostable under the same conditions. III, m. 135-6.degree., was photodecarbonylated to VI, m. 108.degree., and IV, m. 128.5.degree., was photohydrolyzed to VII, m. 111.degree.. III formed an aldoxime (VIII), m. 141-2.degree., which was converted (MeSO3H, pyridine) to the nitrile (IX), m. 152.degree.. Treatment of VI with 0.1N KOH at room temp. yielded X, m. 158-66.degree.; identical with the product formed from XI (Fried and Klingsberg, CA 48, 13701b) by hydrogenation (Pd-C, EtOH) to XII, m. 139.degree., followed by hydrolysis with K2CO3-MeOH to XIII, m. 100.degree. and epimerization (Me2SO, KO-tert-Bu) to X. The vinylidene ether structure of IV was shown by ozonolysis and hydrolytic decompn. to the acetaldehyde, identified by its 2,4-dinitrophenylhydrazone (30% yield), and by hydrogenation (Pd-C, EtOH) of the vinylidene double bond to XIV, m. 143.5.degree.. IV and XIV were hydrolyzed (KOH, boiling MeOH) to XV, m. 127.5.degree., and XVI, m. 189-90.degree., resp. XIV was also reacetylated to IV, which was chem. hydrolyzed (H2SO4, glacial HOAc) to VII, in turn converted (KOH, boiling aq. MeOH) to XVII, m. 108.degree.. XVII was acetylated to the acetoxyketone (XVIII), m. 92.degree.. Ir, uv, and N.M.R. data and [.alpha.]D for the various compds. were reported and discussed.

L13 ANSWER 6 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1966:404188 CAPLUS
DOCUMENT NUMBER: 65:4188
ORIGINAL REFERENCE NO.: 65:774a-b
TITLE: Rearrangement in the substitution reaction of 3-oxo-4.beta.-bromo-5.beta.-steroids
AUTHOR(S): Sato, Yasuo; Muko, Masaaki; Ogaki, Yuichi; Takahashi, Tomoyoshi; Kimura, Takako; Aoki, Hiromitsu; Hagitani, Akira
CORPORATE SOURCE: St. Paul's Univ., Tokyo
SOURCE: Bull. Chem. Soc. Japan (1966), 39(4), 855
DOCUMENT TYPE: Journal
LANGUAGE: English
AB 4.beta.-Bromo-5.beta.-cholestan-3-one (8 g.) in 280 cc. AcOH refluxed 6 hrs. under N with 56 g. AcOK yielded 2.6 g. 2.beta.-acetoxy-5.beta.-cholestan-3-one, m. 149-51.degree., [.alpha.]589 8.0.degree., [.alpha.]400 8.0.degree., [.alpha.]308 -195.0.degree., [.alpha.]285 205.0.degree.. Me 4.beta.-bromo-3-oxocholanate (2 g.), 11 g. AcOK, and 55 cc. AcOH yielded similarly 1.3 g. Me 2.beta.-acetoxy-3-oxocholanate, m. 168.5-70.degree., [.alpha.]589 5.5.degree., [.alpha.]380 9.0.degree., [.alpha.]309 -190.0.degree., [.alpha.]285 230.0.degree..

L13 ANSWER 7 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1966:26686 CAPLUS
DOCUMENT NUMBER: 64:26686
ORIGINAL REFERENCE NO.: 64:5245a-b
TITLE: Some pharmacologic effects of Veratrum alkaloids in sheep and goats
AUTHOR(S): Buck, W. B.; Keeler, R. F.; Binns, Wayne
CORPORATE SOURCE: Natl. Animal Disease Lab., Ames, IA
SOURCE: Am. J. Vet. Res. (1966), 27(116), 340-54
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Infusion of EtOH exts. and purified alkaloids from V. californicum and ester alkaloidal mixts. from V. viride into the jugular vein resulted in a potent hyperglycemic effect in intact and adrenalectomized female sheep and goats. When large amts. of alkaloid were infused, there was a concomitant increase in electroencephalogram (EEG) wave amplitude, and this was followed in a few sec. by complete cessation of EEG activity. This treatment also reduced respiration and stimulated skeletal muscle and gastrointestinal activity. Administration of O by artificial respiration reversed the effects on the EEG and enabled the animals to recover rapidly. The hyperglycemic effect, which may have resulted from an inhibition of glucose utilization, probably caused cessation of EEG activity and may explain the mechanism by which Veratrum produces congenital cyclopian deformities in lambs (ibid. 24(103), 1164-75(1963)). 17 references.

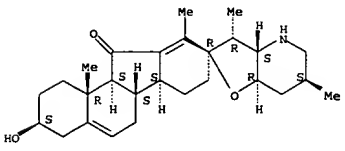
L13 ANSWER 8 OF 34 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1966:68046 CAPLUS
DOCUMENT NUMBER: 64:68046
ORIGINAL REFERENCE NO.: 64:12746f-h,12747a-b
TITLE: Alkaloids of Petilium. eduardi
AUTHOR(S): Shakirov, R.; Nuriddinov, R. N.; Yunusov, S. Yu.
CORPORATE SOURCE: Inst. Chem. Vegetable Compds., Tashkent
SOURCE: Khim. Prirodn. Soedin., Akad. Nauk Uz. SSR (1965), (6), 384-92
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB cf. CA 63, 1858e, 3007f. Imperialine (I), edpetilidine (II), eduardine (III), and edpetiline (IV) (total alkaloids 1.1%) were obtained from upper parts of P. eduardi, gathered in Shargun area by the described method (loc. cit.). Raw material, gathered in Babatag (total alkaloids 1.25%) gave I and IV; the alkaloid fraction, obtained by the extn. of the acid aq. soln. with CHCl3, gave by fractional crystn. III and edpetilidinine (V), C27H45O2N, m. 269-71.degree. (MeOH), [.alpha.]D 42.48.degree. (c 0.306, alc.), .nu. 3425 (OH), 1465, and 2930 (CMe) cm.-1; HCl salt m. 283.degree. (decompn.); HBr salt m. 281-2.degree.. Peimisine (VI) and the base 8, m. 253-7.degree. (Me2CO-MeOH 9:1) were obtained from the mother liquor. The mother liquor after VI gave imperialone. II, C27H45O2N, m. 227-8.degree. (MeOH), was a tertiary base, [.alpha.]D -48.19.degree. (c 2.324, pyridine), Rf 0.85 (BuOH satd. with 5% AcOH), .nu. 3425 (OH), 2925, and 1455 (CMe) cm.-1; HCl salt m. 283-5.degree. (Me2CO); HBr salt m. 270-2.degree. (Me2CO); HI salt m. 262-3.degree. (Me2CO); nitrate m. 225.degree. (H2O, decompn.); methiodide m. 292-4.degree. (MeOH). III, C27H43O2N, m. 247-51.degree. (EtOH), was a tertiary base without the NMe group, [.alpha.]D -53.02 (c 0.977; MeOH), Rf 0.83 (BuOH satd. with 5% AcOH), .nu. 3530 (OH), 1700 (CO), 1450, and 2930 (CMe) cm.-1 Rf values of I, IV, and V in the system BuOH-AcOH-H2O 4:1:5 were 0.80, 0.86, and 0.82, resp. Curves of uv spectra of I and IV were shown. The structure of IV was given (loc. cit.).

L8 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2001 ACS (Continued)
P1640 CAPLUS
(6) Chiang, C; Dev Biol 1999, V205, P1 CAPLUS
(7) Chiang, C; Nature 1996, V383, P407 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1999:436553 CAPLUS
DOCUMENT NUMBER: 131:204460
TITLE: Steroidal alkaloids and stilbenoids from Veratrum taliense
AUTHOR(S): Zhou, Chang Xin; Tanaka, Junichi; Cheng, Christopher H. K.; Higa, Tatsuo; Tan, Ren Xiang
CORPORATE SOURCE: Institute Biotechnology, Department Biological Science
Technology, Nanjing Univ., Nanjing, 210093, Peop. Rep.
China
SOURCE: Planta Med. (1999), 65(5), 480-482
CODEN: PLMEAA; ISSN: 0032-0943
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Phytochem. investigation of roots and rhizomes of Veratrum taliense yielded a new and six known steroidal alkaloids as well as a new and one reported stilbene deriv. By a combination of spectral methods (IR, MS, 1H- and 13C-NMR, COSY, HMQC, HMBC, and NOESY), the structure of the new alkaloid was established as 15-angeloylgermine while the known ones were identified as 15-(2-methylbutyroyl)germine, jervine, 3-veratroylzygadenine, germine, veramiline 3-O-.beta.-D-glucopyranoside and stenophylline B-3-O-.beta.-D-glucopyranoside. The new stilbenoid, named veraphenol, was detd. to be 2-(3',5'-dihydroxyphenyl)-6-hydroxybenzofuran, and the known one was shown to be resveratrol. The in vitro enzyme assay indicated that 3-veratroylzygadenine and resveratrol are inhibitors of xanthine oxidase. The enzyme inhibitory action of resveratrol, the most active compd. found so far in V. taliense, is dose-dependent with the IC50 value at 30 .mu.M (the IC50 value of allopurinol used as a pos. control in the study is 10 mM).
IT **469-59-0**, Jervine
RL: BOC (Biological occurrence); **THU (Therapeutic use)**; BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(steroidal alkaloids and stilbenoids from Veratrum taliense)
RN 469-59-0 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

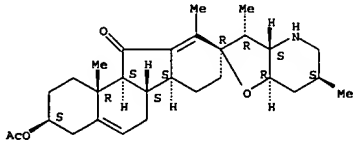
L8 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2001 ACS (Continued)



REFERENCE COUNT: 9
REFERENCE(S): (2) Han, X; Magn Reson Chem 1991, V29, P100 CAPLUS
(3) Jayatilake, G; J Nat Prod 1993, V56, P1805 CAPLUS
(6) Mizuno, M; Phytochemistry 1990, V29, P359 CAPLUS
(7) Osada, Y; Eur J Pharmacol 1993, V241, P183 CAPLUS
(8) Oshima, Y; Tetrahedron 1995, V51, P11979 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1995:686451 CAPLUS
DOCUMENT NUMBER: 123:102413
TITLE: O-acetyljervine: a new .beta.-adrenoceptor agonist from Veratrum album
AUTHOR(S): Gilani, Anwar; Aftab, Khalid; Saeed, S. A.; Ali, Rahat
A.; Rahman, Atta-ur
CORPORATE SOURCE: Medical College, Aga Khan Univ., Karachi, 74800, Pak.
SOURCE: Arch. Pharmacal Res. (1995), 18(2), 129-32
CODEN: APHRDQ; ISSN: 0253-6269
DOCUMENT TYPE: Journal
LANGUAGE: English
AB "I.v. administration of O-acetyljervine (an alkaloid from Veratrum album) produced a dose-dependent (10-100 .mu.g/kg) fall in blood pressure and tachycardia in anesthetized normotensive rats. Pretreatment of animals with propranolol (1 mg/kg) abolished these cardiovascular responses of O-acetyljervine similar to that of isoprenaline (1 .mu.g/kg). In isolated tissue expts., O-acetyljervine (10-100 .mu./mL) produced a dose-dependent relaxation of phenylephrine-induced contraction of the rabbit aorta. In guinea-pig spontaneously beating atria, it caused pos. inotropic and chronotropic responses in a dose-dependent fashion (10-100 .mu./mL). These responses were abolished in the presence of propranolol (1 .mu.g/mL) similar to that of isoprenaline. These results indicate that O-acetyljervine is a adrenoceptor stimulant (.beta.1 and .beta.2) like isoprenaline.
IT **14788-78-4**
RL: BAC (Biological activity or effector, except adverse); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(O-acetyljervine: a new .beta.-adrenoceptor agonist from Veratrum album)
RN 14788-78-4 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(2H)-one, 3-(acetyloxy)-1,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



L8 ANSWER 12 OF 12 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1972:108077 CAPLUS
DOCUMENT NUMBER: 76:108077
TITLE: Anti-inflammatory activity of jervine
AUTHOR(S): Gerashchenko, G. P.; Bondarenko, N. V.; Semenchenko, V. F.
CORPORATE SOURCE: USSR
SOURCE: Aktual. Vop. Farm. (1970), Volume Date 1968 169-71
CODEN: AKVFAM
DOCUMENT TYPE: Journal
LANGUAGE: Russian

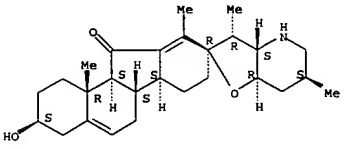
AB Jervine (I) [469-59-0] injected s.c. at 5 mg/kg/day 7 days into rats with a paw imflammation, induced by s.c. implanted cotton pellets, decreased the granuloma exudate and proliferation by 45 and 41%, resp., and the adrenal ascorbic acid [50-81-7] by 30%.

IT **469-59-0**
RL: BAC (Biological activity or effector, except adverse); **THU** (**Therapeutic use**); BIOL (Biological study); USES (Uses)
(inflammation inhibition by)

RN 469-59-0 CAPLUS

CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 5 OF 5 USPATFULL

ACCESSION NUMBER: 2000:38195 USPATFULL

TITLE: Method and apparatus for rapid determinations of voltage and current in wires and conductors

INVENTOR(S): Singer, Jerome R., 2917 Avalon Ave., Berkeley, CA, United States 94705
Libove, Joel M., 34 Canyon View Dr., Orinda, CA, United States 94563

PATENT INFORMATION:	NUMBER	KIND	DATE
	US 6043641		20000328
APPLICATION INFO.:	US 1998-81263		19980519 (9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1998-25043, filed on 17 Feb 1998		

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Do, Diep N.
LEGAL REPRESENTATIVE: Cohen, Howard
NUMBER OF CLAIMS: 22
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 7 Drawing Figure(s); 3 Drawing Page(s)
LINE COUNT: 489
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

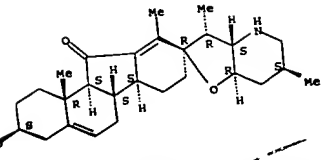
AB A device for non-contact, non-invasive measurement of current or power in a wire, cable or conductor includes a small coil having multiple turns with a thin ferromagnetic strip. The coil may be secured to a wand or housing adapted to be used to place the coil in close proximity to the wire, cable or conductor, whereby a voltage is induced in the coil. An amplifier and or an analog or digital signal processor is utilized to increase sensitivity. A readout indicates the magnitude of the induced voltage, and a scaling device renders the readout display indicative of the current or power in the wire, cable, or conductor. The readout may comprise a digital display, a series of light emitting devices, an oscilloscope, a digital computer display system, or a flashing light emitting device having a flash rate proportional to the magnitude of the voltage. The device may be constructed in a wand or pen-like fashion, with the coil and strip incorporated into the wand. The device may be combined with a voltage sensor to read out relative voltages.

IT 469-59-0, Jervine 4449-51-8, Cyclopamine
(use of steroidal alkaloid derivs. as inhibitors of hedgehog signaling pathways in relation to effect on cholesterol biosynthesis)

RN 469-59-0 USPATFULL
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)- (9CI) (CA INDEX NAME)

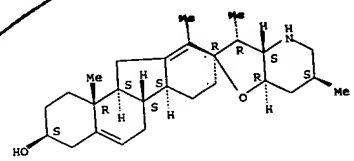
Absolute stereochemistry.

L9 ANSWER 5 OF 5 USPATFULL (Continued)



RN 4449-51-8 USPATFULL
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



09/708,974

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L14         309 S L5 FULL
L15           0 S L14 AND USC/FA

     FILE 'CAPLUS' ENTERED AT 10:17:03 ON 13 NOV 2001
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